



FREE

MATHEMATICS

MODULE 6



ADDITION AND SUBTRACTION OF LARGE NUMBERS



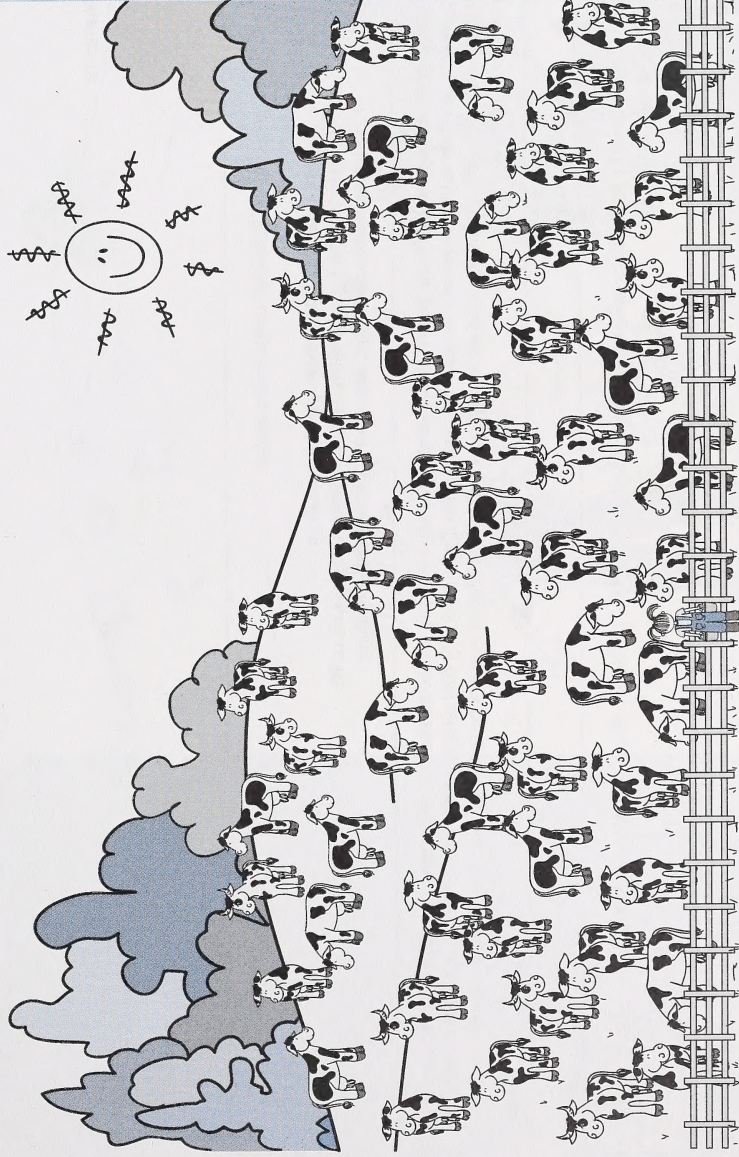
Learning
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GRADE THREE MATHEMATICS: MODULE 6

ADDITION AND SUBTRACTION OF

LARGE NUMBERS



Grade Three Mathematics
Module 6: Addition and Subtraction of Large Numbers
Student Module Booklet
Learning Technologies Branch
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This document is intended for	
Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	



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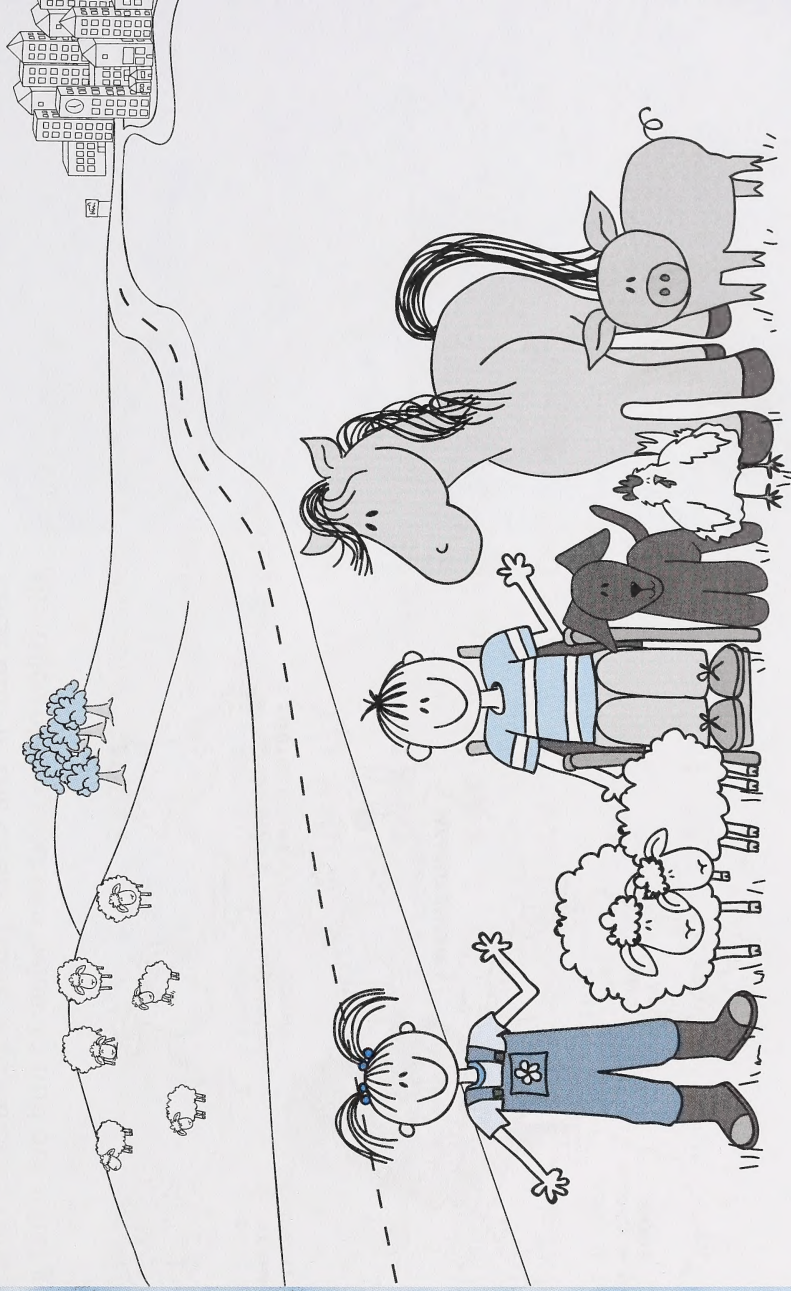
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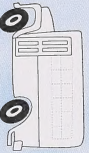
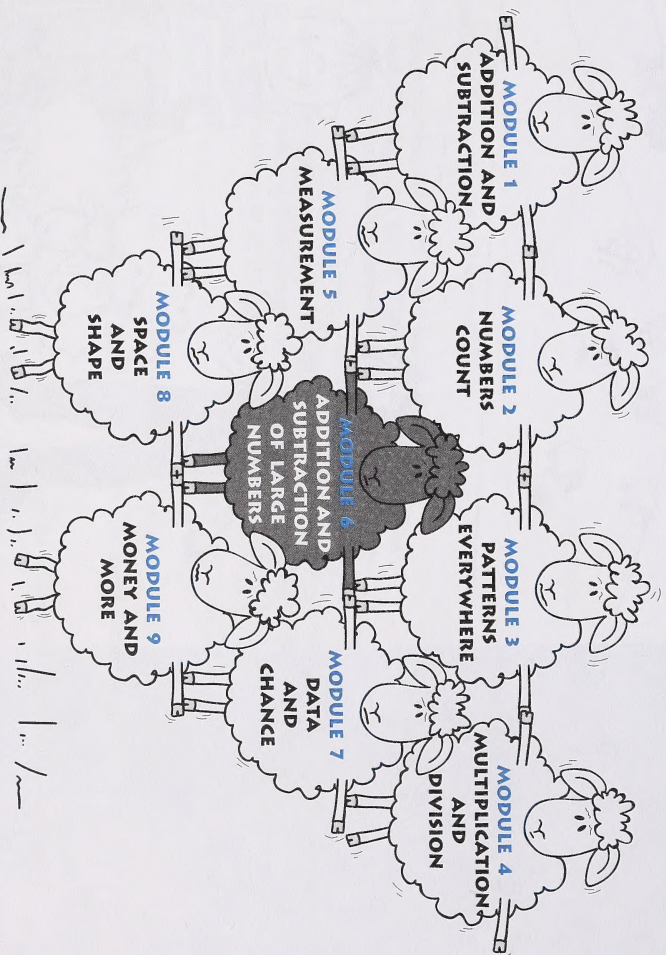
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WELCOME TO GRADE THREE MATHEMATICS



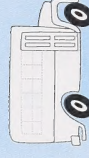
You may not realize it, but you use mathematics many times every day. You are using math when you count the money in your pocket, find a date on the calendar, or sort your toys. As you work through Grade Three Mathematics you will learn how to do many new things. You will also learn how math can be useful in solving everyday problems.

Each unit in the Grade Three Mathematics course is called a **module**. Read the titles of the modules below to find out what you will learn about this year.



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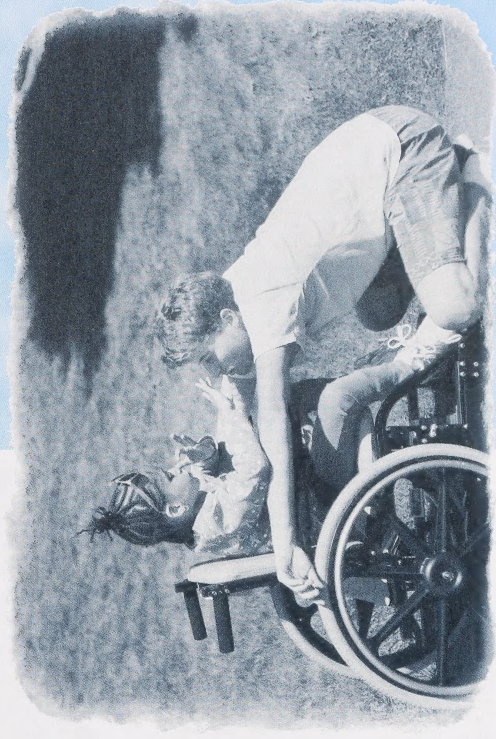


ADDITION AND SUBTRACTION OF LARGE NUMBERS

You have been learning about four math operations: addition, subtraction, multiplication, and division. These operations can help you solve all kinds of real-life problems.

In Module 1, you reviewed how to add and subtract numbers with one and two digits. In this module, you will learn how to add and subtract large numbers. You will also practise solving word problems.

You will begin to check your own answers using the “Answer Key to the Self-Marking Activities” in the Appendix of this Student Module Booklet.



Help your student gather these materials and place them in the Math Box for this module. Remove and store materials from previous modules that you will not need for this module.

A commercial base ten kit allows the student to visualize the units more clearly. The bean sticks made on Day 3 of Module 2 may also be used. If you do not have the Place-Value Mat from Module 1, refer to the margin note on page 8.

Monitor your student as he or she begins to self-mark the activities. Be sure that the student completes the activities in the Student Module Booklet before looking at the answers. Show the student how to locate each question and how to compare the answers. Explain that the student's own wording may not be exactly the same as the given answer, but the meaning should be the same.

MATERIALS FOR MODULE 6

For Module 6, you will need some of the following items:

- Place-Value Mat from Day 11 of Module 1
- deck of playing cards (optional)
- grocery-store sales flyer
- real or play money (optional)
- base ten blocks
- calculator (TI-108)
- 3 paper clips
- scissors

USING THE “ANSWER KEY TO THE SELF-MARKING ACTIVITIES”

In this module, you will learn how to check your own work. Your home instructor will help you with this.



This icon will tell you when to use the “Answer Key to the Self-Marking Activities” in the Appendix.

Be sure that you have completed your work before checking the answers. Look carefully for the correct day, lesson, and question number. Then compare your answer with the Answer Key. Is your answer correct? If the answer is not correct, can you tell why? If you didn't understand why you made a mistake, discuss it with your home instructor. You will use self-marking activities in grade four, so it is important to learn to do this correctly.



DAY 1: ADDING LARGE NUMBERS

Do you like playing games like checkers or chess? You can use many strategies to win. You can also use many strategies when you want to find answers to addition problems.

What strategies do you like best to solve addition problems? You can now use many of these strategies to help you add three-digit numbers.

In today's activities, you will find different ways to find answers to addition questions. Base ten blocks will help you solve some questions with larger numbers.



Encourage your student to recall a method he or she prefers.

LESSON 1

How could you solve the number sentence that follows? Tell your home instructor.

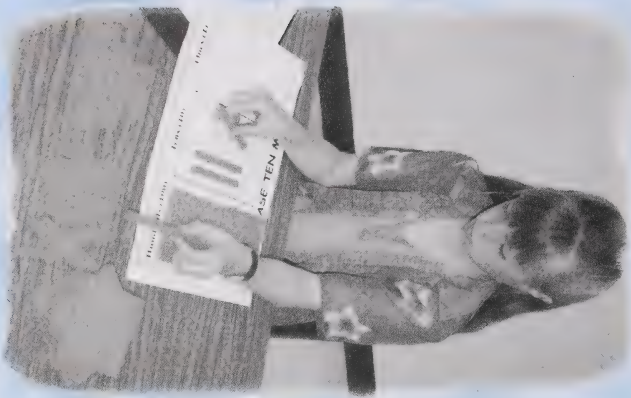
$$24 + 53 = \underline{\hspace{2cm}}$$

Think about some of the other strategies you have used to solve addition problems.

You could

- use real objects
- use base ten blocks
- draw a picture
- count on
- add the ones and then the tens in your mind
- write the equation the other way and add the ones and then the tens

$$\begin{array}{r} 24 \\ + 53 \\ \hline \end{array}$$



ADDING LARGE NUMBERS

1. a. Solve the following equation.

$$24 + 53 = \underline{\hspace{2cm}}$$

b. What strategy did you use? _____

1000

2. Look at the following equation and then answer the questions.

$$227 + 341 = \underline{\hspace{2cm}}$$

a. Could you use real objects, such as pennies or buttons, to find the answer? _____

b. Do you think it would be a good idea to use pennies or buttons? Why or why not? _____

c. Could you use base ten blocks to find the answer? _____

Allow the student to use any strategy to solve the problem, even if it is not the most efficient.

Discuss the questions with your student. Help the student understand that not all strategies would be efficient for solving problems that involve large numbers.

d. Do you think using base ten blocks would be better than using

pennies or buttons? Why or why not? _____

3. a. Solve the following equation.

$$227 + 341 = \underline{\hspace{2cm}}$$

b. What strategy did you use? _____

4. What strategies do you think would work best to solve problems with

large numbers? _____

Remember to monitor your student as he or she begins to self-mark the activities. Provide guidance as required.

If your student finds it too difficult to mark the answers independently, you may wish to do it together or you may continue marking the student's work and have the student try again in a few weeks. The student will use self-marking activities in grade four, so try to work toward that goal.



Use the "Answer Key to the Self-Marking Activities" to check each question in Day 1: Lesson 1.



LESSON 2

In Module 3, you learned that putting large numbers into groups of ones, tens, and hundreds made them much easier to count. Using groups also makes it easier to add large numbers.



Take out your base ten blocks.

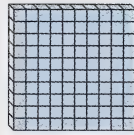
Do you remember what the various blocks show?



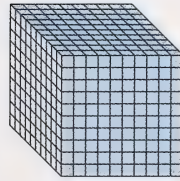
The unit cube shows 1.



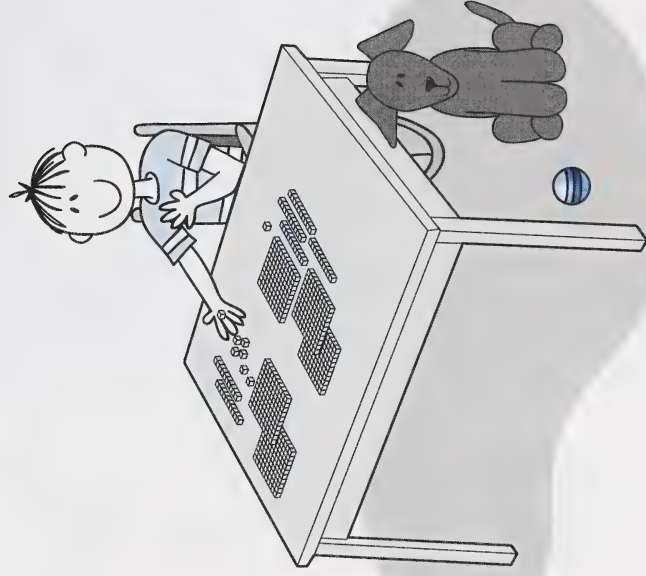
The rod shows 10.



The flat shows 100.



The large cube shows 1000.



DAY 1

If necessary, review how to change the standard form of a number into the expanded form. For example, 227 is the same as 2 hundreds, 2 tens, and 7 ones.

Encourage the student to use the base ten blocks even if he or she understands how to use the vertical notation to find the answer. Using concrete representation will help the student visualize the process when regrouping becomes necessary.

If your student has misplaced the Place-Value Mat from Module 1, you could make a new one using an opened file folder.

Hundreds (100)	Tens (10)	Ones (1)



GRADE THREE MATHEMATICS

Use your base ten blocks to solve the following equation:

$$227 + 341 = \underline{\hspace{2cm}}$$

First make 227. Now make 341. Put the two groups together.

1. How many of each block do you have now? What is the number?

_____ hundreds, _____ tens, _____ ones, or _____

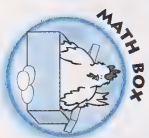
2. Use your base ten blocks to find the answers to the following addition questions.

a. $300 + 439 = \underline{\hspace{2cm}}$ b. $522 + 174 = \underline{\hspace{2cm}}$

c. $243 + 405 = \underline{\hspace{2cm}}$ d. $140 + 354 = \underline{\hspace{2cm}}$

e. $213 + 426 = \underline{\hspace{2cm}}$ f. $169 + 610 = \underline{\hspace{2cm}}$

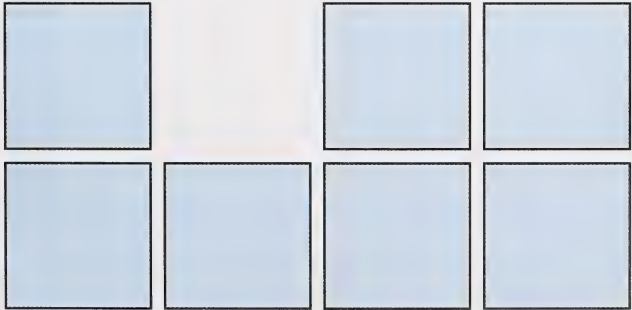
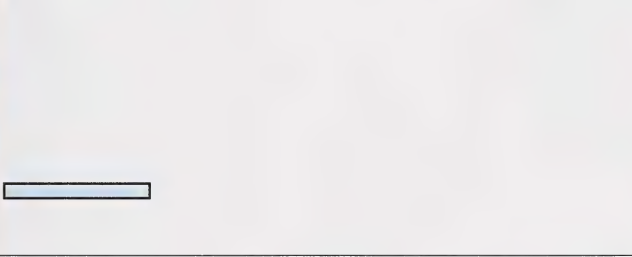
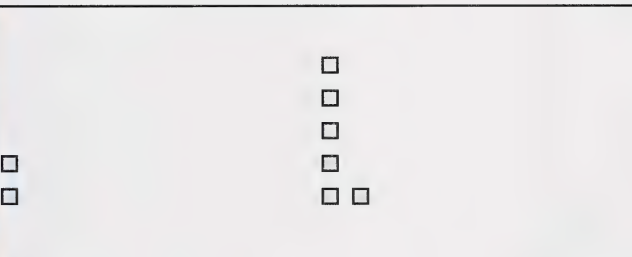
Using a place-value mat can make it even easier to find the answer.

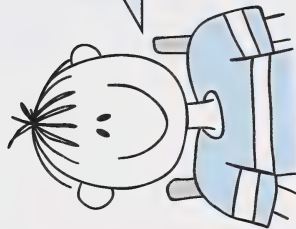


Take out your place-value mat.

ADDING LARGE NUMBERS

Use your base ten blocks and place-value mat to solve $312 + 406 =$ _____.

Hundreds (100)	Tens (10)	Ones (1)
		



When I put the groups in the hundreds, tens, and ones columns, it is easier to add.

3. $312 + 406 =$ _____ hundreds, _____ tens, _____ ones.

Now I can see the answer is _____.



Day 1

Review with the student how to draw simple shapes to represent the base ten blocks:

- a small square for a ones cube
☐

- a rectangle for a tens rod
☐

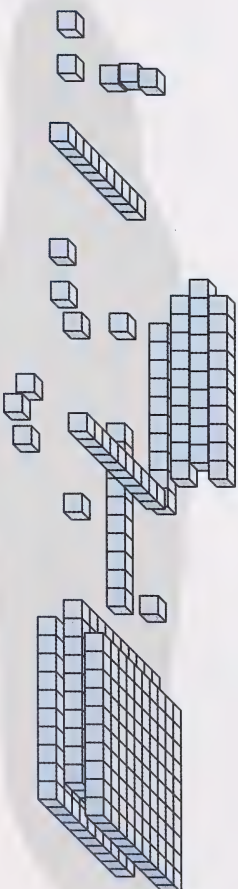
- a large square for a hundreds flat
☐



4. Use your base ten blocks and place-value mat to solve the following equations. Draw the blocks for the first two questions.

a. $210 + 157 =$ _____

Hundreds (100)	Tens (10)	Ones (1)



ADDING LARGE NUMBERS

b. $53 + 312 =$ _____

Hundreds (100)	Tens (10)	Ones (1)

c. $181 + 405 =$ _____

d. $322 + 105 =$ _____



Use the "Answer Key to the Self-Marking Activities" to check your work for Lesson 2.



Go to Assignment Booklet 6A.

DAY 2: MORE STRATEGIES

Sarah likes going fishing with her grandpa. Grandpa's strategy is to use a red hook. Sarah uses a blue and yellow hook. They both catch fish.

On Day 1, you used base ten blocks to find the answers to some addition number sentences. In today's lessons, you will practise another effective method. Both strategies can be used to find the sum of large numbers!



LESSON 1

On Day 1, you used base ten blocks to add large numbers. You counted the total number of ones, tens, and hundreds. You can do the same thing without the blocks.

Writing the number sentence up and down instead of across can make equations easier to solve. Look at the following equation:

$$\begin{array}{r} 313 \\ + 521 \\ \hline \end{array}$$

When you write the equation, you must be sure the ones, tens, and hundreds are lined up with each other. Some people use a little chart that looks like a place-value mat.

Hundreds	Tens	Ones
3	1	3
+ 5	2	1

To find the total, you add the ones, then the tens, and then the hundreds.

The traditional way of adding large numbers is presented. Some students find it confusing to consider the digits in isolation. Continue to allow the student to use base ten blocks if this occurs.

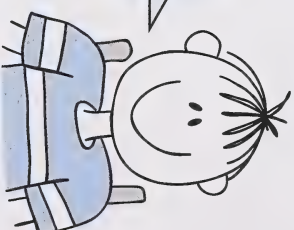


DAY 2

You can make your own place-value chart. You can use an **H** to stand for hundreds, a **T** to stand for tens, and an **O** to stand for ones.

hundreds	tens	ones
H	T	O
3	1	3
+ 5	2	1

Using a chart like this helps me line up the numbers.



Adding the ones, tens, and hundreds is the same as thinking $3 + 1$ is 4, $10 + 20$ is 30, and $300 + 500$ is 800.



$4 + 30 + 800$ is 834.
So, $\begin{array}{r} 313 \\ +521 \\ \hline 834 \end{array}$



1. The equations have been put into charts for you. Solve each equation carefully.

a.

H	T	O
1	4	7
+2	3	2

b.

H	T	O
2	0	4
+3	9	4

c.

H	T	O
6	3	2
+3	1	5

d.

H	T	O
4	2	6
+1	5	3

e.

H	T	O
5	0	4
+2	0	1

2. Sometimes the equation may have a three-digit number and a two-digit number, like the following question. Make sure the tens and ones line up correctly. Find the answer to this equation.

$$345 + 53 = \underline{\hspace{2cm}}$$

or

345	
+ 53	

or

H	T	O
3	4	5
+	5	3

DAY 2

3. Write each of the following equations the other way. Then make a chart to find the answer.
For example,

$$421 + 33 = 454$$

or

$$\begin{array}{r} 421 \\ + 33 \\ \hline 454 \end{array}$$

or

H	T	O
4	2	1
+	3	3
4	5	4

$$a. 62 + 123 = \underline{\hspace{2cm}}$$

or

or

$$b. 811 + 105 = \underline{\hspace{2cm}}$$

or

or



c. $946 + 13 =$ _____ or

or

d. $67 + 402 =$ _____ or

or

e. $156 + 830 =$ _____ or

or



DAY 2

f. $90 + 109 =$ _____ or

or

As you practise adding large numbers, you may soon find that you do not need the small chart.

4. Solve these equations. Use your favourite strategy.

a.
$$\begin{array}{r} 612 \\ + 27 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 703 \\ + 291 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 157 \\ + 702 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 521 \\ + 65 \\ \hline \end{array}$$



This is getting easier to do! I can do these without the chart.



Use the "Answer Key to the Self-Marking Activities" to check your work for Lesson 1.

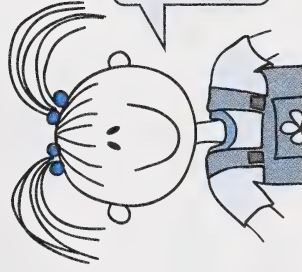


LESSON 2

Some equations are easy to do in your mind even though they may include large numbers.

- When both numbers end in two zeros, you are adding hundreds. Think about adding hundreds flats with base ten blocks.

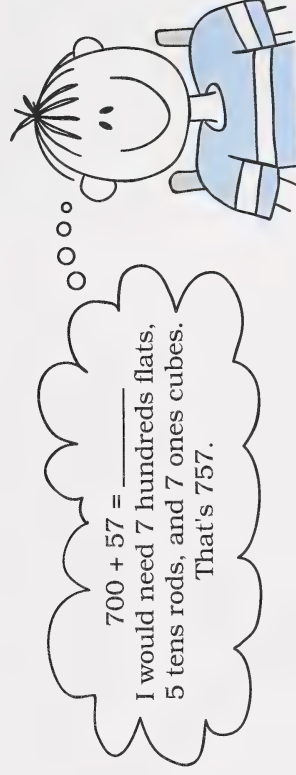
$$\begin{array}{r} 300 \\ + 400 \\ \hline \end{array}$$



$300 + 400 = \underline{\hspace{2cm}}$
That's easy! 3 hundreds flats + 4 hundreds flats is 7 hundreds flats, so $300 + 400 = 700$.

- When you add one number that ends in two zeros and another number, think about the base ten blocks you would use.

$$\begin{array}{r} 700 \\ + 57 \\ \hline \end{array}$$



$700 + 57 = \underline{\hspace{2cm}}$
I would need 7 hundreds flats, 5 tens rods, and 7 ones cubes.
That's 757.

DAY 2

1. Imagining the base ten blocks in your mind can help you solve many problems. Try to do the following equations in your mind.

$• 500 + 300 = \underline{\hspace{2cm}}$

$• 100 + 400 = \underline{\hspace{2cm}}$

$• 600 + 200 = \underline{\hspace{2cm}}$

$• 300 + 200 = \underline{\hspace{2cm}}$

$• 400 + 45 = \underline{\hspace{2cm}}$

$• 34 + 200 = \underline{\hspace{2cm}}$

$• 20 + 100 = \underline{\hspace{2cm}}$

$• 500 + 39 = \underline{\hspace{2cm}}$

You may use other strategies or ways of thinking to solve problems. Use the ways that make sense to you.



295 + 30 = ? If I add an extra 5 to 295 that makes 300. 300 + 30 is 330. Now I need to take off the extra 5 I added at first. That makes 325.
295 + 30 = 325



Encourage your student to develop personal strategies for adding large numbers. Traditional written equations are useful, but allow the student to develop independent strategies as well. Encourage the student to manipulate numbers in a way that makes sense to him or her. Ask the student to explain his or her thinking or to “prove it” as answers are calculated.



$325 + 425 = ?$
I know that $25 + 25$ is 50
and $300 + 400$ is 700.
That makes 750 altogether.

2. Try solving these equations in your mind using a different strategy.

• $196 + 20 =$ _____ • $395 + 40 =$ _____

• $498 + 10 =$ _____ • $297 + 50 =$ _____



Use the “Answer Key to the Self-Marking Activities” to check your work.



Go to Assignment Booklet 6A.

DAY 3: ESTIMATING

How far away from Earth is the Moon?
How far away from Earth are the
astronauts when they take their
spacewalks? These numbers are very
large and most people do not need an
exact number. An estimate gives a
reasonable answer.

In some types of problems, only an
estimate is needed. You do not always
need an exact answer.

As you work with larger numbers,
estimating becomes an important skill.
Estimating can give you a reasonable
answer that is much quicker. It can also
be used to check your answers.



LESSON 1

In Modules 1 and 2, you learned how to estimate answers. Do you remember rounding the numbers to the nearest ten to make them easier to work with? People often find it easier to add numbers that end in zeros.

To round 389 to the nearest ten, look at the ones digit. Is it more or less than 5?

389

Since the number in the ones place is more than 5, you round ahead to the next ten. You have 8 tens, so adding one more will make 9 tens, giving 390. The hundreds digit does not change. So, the number 389 rounded to the nearest ten is 390.

1. Round each of the following numbers to the nearest ten.

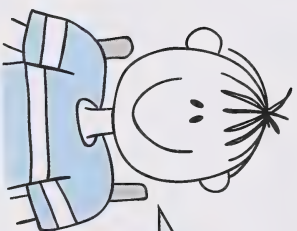
Hint: Look at the ones digit in each number.

- a. 521 _____ b. 677 _____ c. 209 _____

What happens if you round to the nearest ten when the ones digit is 5 or more and the tens digit is 9?

You may wish to review Day 12 of Module 2 with your student.





Watch out for these two things!
When the ones digit is 5 or more,
and the tens digit is 9, the hundreds
digit will change. When I round a
number like **498** to the nearest ten,
I have to round ahead to **500**.

2. Round these numbers to the nearest ten.

- a. 397 _____ b. 494 _____ c. 689 _____ d. 795 _____

Rounding numbers to the nearest hundred works much the same way.

To round to the nearest hundred, you look at the digit in the **tens** place.

3. To round 363 to the nearest hundred, you look at the tens digit. The digit in the tens place is _____.

Numbers with less than 5 in the tens place are rounded back to the previous hundred.

Numbers with 5 or more in the tens place are rounded up to the next hundred.

300 310 320 330 340 350 360 370 380 390 400

Another way to think about rounding is to tell the student to look at the last two digits in a three-digit number. If they are less than 50, the number is rounded back to the previous hundred. If the last two digits are 50 or more, the number is rounded up to the next hundred.



4. Rounded to the nearest hundred, 363 is _____.
5. Round each of these numbers to the nearest hundred.
- a. 592 _____ b. 105 _____ c. 478 _____ d. 351 _____



Use the "Answer Key to the Self-Marking Activities" to check your work.

LESSON 2

Rounding is often used to estimate the answer to an addition or subtraction problem. (You will look at subtracting large numbers later in this module.)

Rounding to the nearest hundred is a quick way to estimate an answer when adding large numbers.

Try this example.

$$\begin{array}{r}
 451 \\
 + 234 \\
 \hline
 \end{array}
 \begin{array}{l}
 \xrightarrow{\text{round to the nearest hundred}} 500 \\
 \xrightarrow{\text{round to the nearest hundred}} + 200 \\
 \hline
 700 \text{ } \longleftarrow \text{estimated answer}
 \end{array}$$

1. You have estimated an answer. Now find the exact answer.

$$\begin{array}{r} 451 \\ + 234 \\ \hline \end{array}$$

2. Compare the estimated and exact answers. Was your estimated

answer reasonable? _____

3. Round each number to the nearest hundred and estimate the total. Then find the exact answer. Compare the two answers.

a. 365 round to the nearest hundred \rightarrow _____

$+ 132$ round to the nearest hundred \rightarrow $+$ _____

\leftarrow exact answer

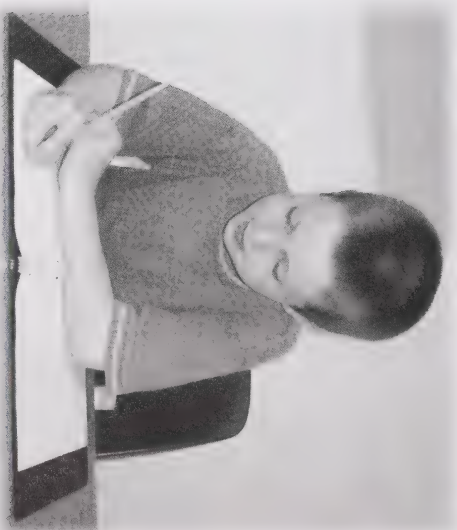
\leftarrow estimated answer

b. 443 round to the nearest hundred \rightarrow _____

$+ 333$ round to the nearest hundred \rightarrow $+$ _____

\leftarrow exact answer

\leftarrow estimated answer



Rounding to the nearest hundred will give you an estimate that is within 100 of the exact answer. You can easily do this in your mind with practice. However, the estimate rounded to the nearest hundred is sometimes too far from the exact answer.

For a closer estimate, you can round to the nearest ten or use a combination of strategies that makes it easy to add in your head.

- Rounding to the nearest ten

$$\begin{array}{r}
 451 \xrightarrow{\text{round to the nearest ten}} 450 \\
 + 234 \xrightarrow{\text{round to the nearest ten}} + 230 \\
 \hline
 685 \xleftarrow{\text{exact answer}} \quad \quad \quad 680 \xleftarrow{\text{estimated answer}}
 \end{array}$$

- Using a combination of strategies



I'm good at adding 25s so I estimate like this:
 451 is close to 450, and 234 is close to 225. I know $50 + 25$ is 75 and $400 + 200$ is 600. The answer should be close to 675.

4. Round each number to the nearest ten and estimate the total. Then go back and find the exact answer.

a. 683 round to the nearest ten \longrightarrow

+ 102 round to the nearest ten \longrightarrow +

\longleftarrow exact answer

\longleftarrow estimated answer

b. 412 round to the nearest ten \longrightarrow

+ 355 round to the nearest ten \longrightarrow +

\longleftarrow exact answer

\longleftarrow estimated answer

c. 264 round to the nearest ten \longrightarrow

+ 621 round to the nearest ten \longrightarrow +

\longleftarrow exact answer

\longleftarrow estimated answer

Use the "Answer Key to the Self-Marking Activities" to check your work.



LESSON 3

Some problems can be solved by an estimate. An exact answer is not always needed. You must think about how close to the exact answer you will need to be. Solve the following problems using the problem-solving steps and your estimation skills.



Luke's class is planning a penny carnival for the school. There are 361 students in Luke's school.

1. At one booth, the students will throw darts at balloons. The balloons come in packages of 100. How many packages will the class need to buy if each student in the school pops 2 balloons?

a. What do you need to find out?

Understand the problem.

You can estimate by 100s since the balloons come in 100s.

Make a plan.

b. You know there are 361 students. If you round the number of students to the nearest hundred, you would get _____.

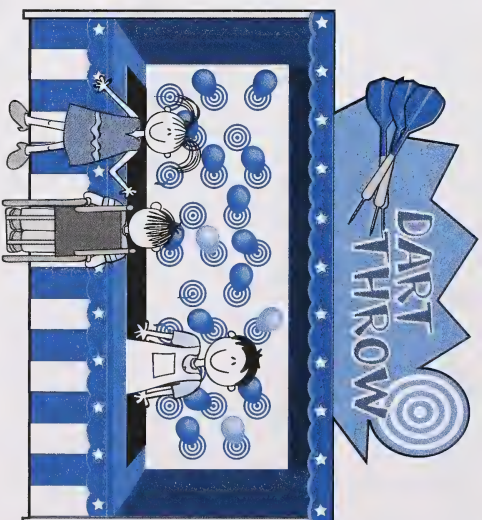
Try the plan.

c. If each student pops 2 balloons, you will need to double that number. Luke's class will need _____ balloons.

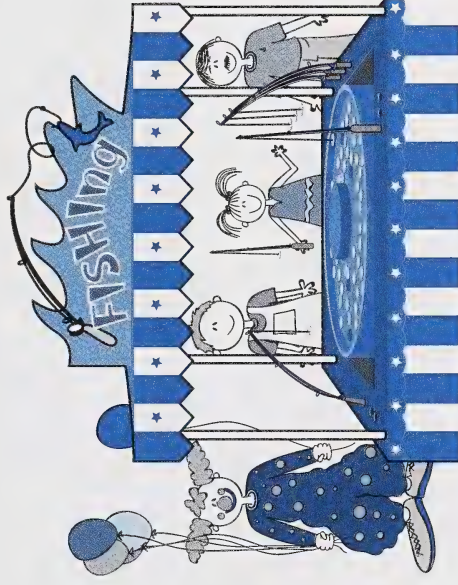
d. There are 100 balloons in a package, so the class will need _____ packages.

Look back.

Is your answer reasonable? Does it answer the question?



2. For the fishing game, the students will make 361 bags with a small treat in each bag. The class has already bought 224 gummy bears and 112 jelly worms. Are there enough candies to put 1 in each bag?



a. What do you need to find out?

- b. Round the number of each kind of candy to the nearest ten and find the total number of candies.

Understand
the
problem.

Make
a
plan.

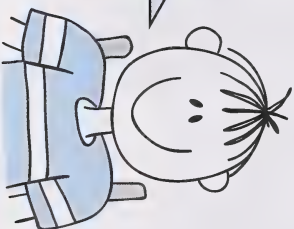
Try
the
plan.

c. Are there enough candies to put one in each bag? Explain.

Look
back.

Is your answer reasonable? Does it answer the question?

It was fun solving problems for the penny carnival using estimating. I learned that you do not have to find an exact answer for some problems.



ANSWER KEY



Use the "Answer Key to the Self-Marking Activities" to check your work.



Go to Assignment Booklet 6A.



DAY 4: REGROUPING

Do you have several pairs of shoes in your closet? There are many ways you can group and regroup your shoes: indoor shoes, outdoor shoes, shoes with laces, shoes that slip on, and so on. You can also regroup numbers.

When you add large numbers, you may need to trade the ones for tens or the tens for hundreds. This is called regrouping. Do you remember how to regroup?

You will use base ten blocks to regroup some three-digit numbers in today's lessons. Are you ready to get started?



LESSON 1

When you studied number concepts in Module 2, you learned that a number can be described in many ways.

For example, 457 is the same as

- 4 hundreds, 5 tens, and 7 ones
- 4 hundreds, 4 tens, and 17 ones
- $400 + 50 + 7$
- $300 + 150 + 7$

Look carefully at the number in the box in each row. Then circle the group of numbers beside it that is the same as the number in the box. You can use your base ten blocks if you like. The first one is done for you.

1.

693

$500 + 90 + 3$

600 + 90 + 3

$600 + 40 + 3$

2.

389

3 hundreds, 5 tens,
and 9 ones

3 hundreds, 8 tens,
and 9 ones

3.

230

$100 + 130$

$200 + 3$

$100 + 10 + 10$

If your student has difficulty describing numbers in different ways, you may wish to review Day 10 of Module 2.



4. 841 8 hundreds, 3 tens,
and 11 ones

8 hundreds, 4 tens,
and 11 ones



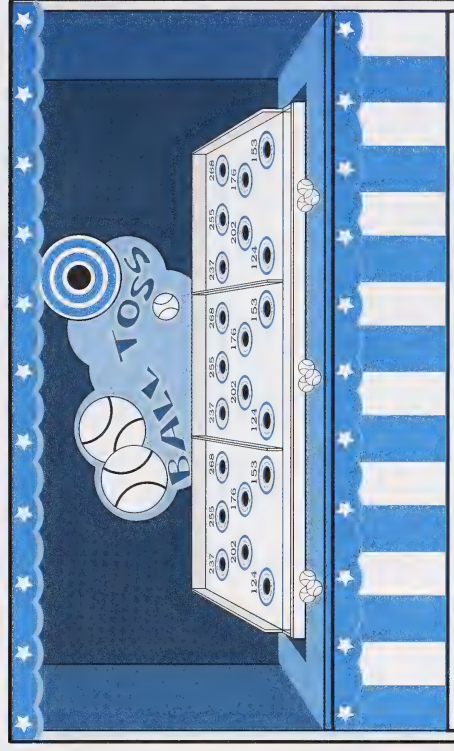
Use the "Answer Key to the Self-Marking Activities" to check your work for Lesson 1.

LESSON 2

At the penny carnival, Luke was in charge of the Ball Toss game. He had to keep track of each student's total score for two tosses.

The student who got the highest score by the end of the day won a prize.

Maria hit 124 and 237. What is her score?





Take out your base ten blocks and your place-value mat.

Use your base ten blocks to help find out Maria's score.

Maria hit 124 and 237.

Show 124 with your blocks on the place-value mat. Now add 237 to the place-value mat.

Your place-value mat should look like this.

Hundreds (100)	Tens (10)	Ones (1)






1. Count the blocks.

a. There are

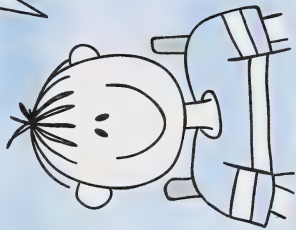
_____ hundreds, _____ tens, and _____ ones.

There are more than 10 ones. You can trade ten ones for a tens rod and put it in the tens column.

Hundreds (100)	Tens (10)	Ones (1)
		

b. Now you have _____ hundreds, _____ tens, and _____ ones.

Another way of writing this is $300 + 50 + 11$.



Monitor your student as he or she regroups the ones. Does the student understand why the ones need to be regrouped before a number for the total can be determined?

Remind the student that although there are many ways of writing a number, the simplest form is usually used to answer a math problem.

DAY 4

Another name for 3 hundreds, 5 tens, and 11 ones is 3 hundreds, 6 tens, and 1 ones.

You cannot trade more ones or tens. Count the blocks to find the total.

c. $124 + 237 =$ _____

d. Maria's score is _____.



Another way of doing this is to think about $300 + 50 + 11$. Add 50 and 11 to get 61. $61 + 300$ is 361.

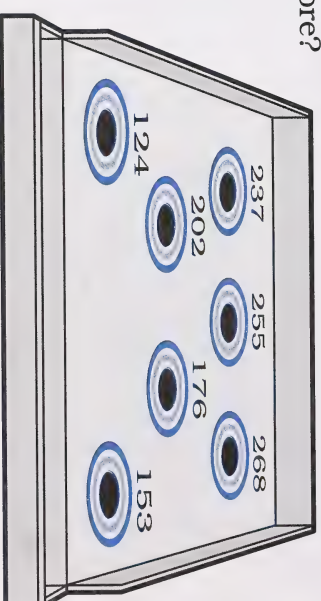
When there are 10 or more ones, you need to regroup them into the tens column. What do you do if there are 10 or more tens?

2. Luke's friend Jorli came next. He hit 153 and 176. What is his score?

Use the base ten blocks and place-value mat. Find Jorli's score by answering the following questions.

a. There are _____ hundreds, _____ tens, and

_____ ones.



b. Another way of writing this is _____ + _____ + _____.

c. What do you notice about the tens column? _____

d. What do you think you should do? _____

e. Another name for 2 hundreds, 12 tens, and 9 ones is _____ hundreds, _____ tens, and _____ ones.

Another way of doing this is to add the numbers in each column.

$$200 + 120 + 9$$

f. Jorli's score is _____.

You have discovered that when there are 10 or more tens, you need to regroup them into the hundreds column.



Sometimes you need to regroup both the tens and the ones. Use the base ten blocks and place-value mat to help you.

3. Sonia played the Ball Toss game next. She hit 176 and 255.

a. There are _____ hundreds, _____ tens, and _____ ones.

b. Another way of writing this is $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$.

Count the ones blocks. There are more than 10 ones. Trade 10 ones for a ten rod.

c. Now there are _____ hundreds, _____ tens, and _____ ones.

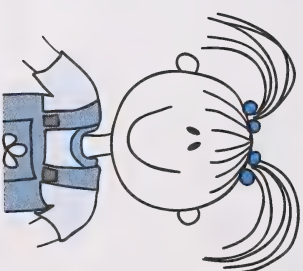
There are more than 10 tens. Trade 10 tens for a hundreds flat.

d. Now there are _____ hundreds, _____ tens, and _____ ones.

e. Sonia's score is _____.

f. Why do you think it is a good idea to change the ones before you change the tens?

Another way of finding the total is to add the numbers in each place-value column. The totals are $300 + 120 + 11$. $120 + 11$ is 131. $300 + 131$ is 431.



4. Find the total for each of the following scores. Use your base ten blocks and place-value mat.

a. Ling: 124 and 268 Total score: _____

b. Justin: 237 and 255 Total score: _____

c. Fatima: 176 and 268 Total score: _____

d. Tom: 153 and 176 Total score: _____

e. Rafael: 202 and 268 Total score: _____

5. Which student in question 4 had the highest score? _____



Use the “Answer Key to the Self-Marking Activities” to check your work.

Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you completed.



Use the “Answer Key to the Self-Marking Activities” to check your work. Then write the number correct. Remember to also colour the number you got correct in your timed exercise on your Math Facts Graph found in the Appendix.



TIMED EXERCISE: 2 MINUTES

$$3 + 4 = \underline{\hspace{2cm}} \qquad 8 + 8 = \underline{\hspace{2cm}} \qquad 5 + 3 = \underline{\hspace{2cm}} \qquad 7 + 6 = \underline{\hspace{2cm}} \qquad 8 + 4 = \underline{\hspace{2cm}} \qquad 5 + 6 = \underline{\hspace{2cm}}$$

$$7 + 5 = \underline{\hspace{2cm}} \qquad 2 + 7 = \underline{\hspace{2cm}} \qquad 3 + 6 = \underline{\hspace{2cm}} \qquad 5 + 4 = \underline{\hspace{2cm}} \qquad 6 + 8 = \underline{\hspace{2cm}} \qquad 9 + 2 = \underline{\hspace{2cm}}$$

$$6 + 9 = \underline{\hspace{2cm}} \qquad 5 + 5 = \underline{\hspace{2cm}} \qquad 9 + 9 = \underline{\hspace{2cm}} \qquad 3 + 8 = \underline{\hspace{2cm}} \qquad 0 + 3 = \underline{\hspace{2cm}} \qquad 5 + 8 = \underline{\hspace{2cm}}$$

$$\begin{array}{r} 9 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 8 \\ \hline \end{array}$$

There is no assignment in the Assignment Booklet for Day 4.

Number completed	
Number correct	



DAY 5: PENCIL-AND-PAPER STRATEGIES

Do you remember riding your bicycle on your own for the first time? It was a real challenge but you did it!

Today you will practise adding three-digit numbers without using your base ten blocks. You will learn two different ways to do this. Are you ready for this math challenge?



Base ten blocks help students visualize regrouping, but as students become competent with the process, they should move toward solving problems with written and mental math strategies.

If your student has difficulty with the following problems, have the student use base ten blocks first, and then try the pencil-and-paper method of solving the problem.

LESSON 1

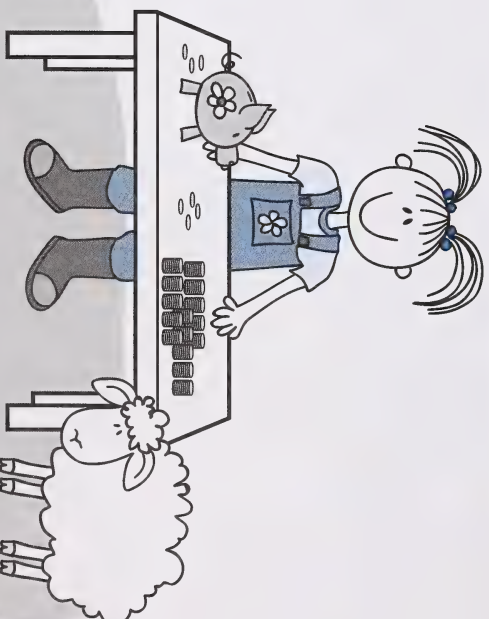
Base ten blocks are very useful for helping you add large numbers, but it takes a long time to count out the blocks. You can use a pencil and paper to show regrouping.

Each person in Sarah's family saves coins for vacation spending money. In the summer they plan to visit Luke and his family in the city.

Sarah made a list to show how many pennies each person had.

Number of Pennies

Sarah: 429
 Oliver: 362
 Mom: 543
 Dad: 398



How many pennies do Sarah and Oliver have altogether?



You could use base ten blocks or draw a picture to find the answer, but that would take a long time.

You can find the answer by adding the ones, the tens, and then the hundreds.

Write the numbers one over the other. Line up the hundreds, tens, and ones. You can use a little place-value chart if you like. Add the numbers.

H	T	O
4	2	9
+ 3	6	2
7	8	11

You need to trade 10 ones for a ten.

To save time and prevent confusion, you can regroup the ones as you add.

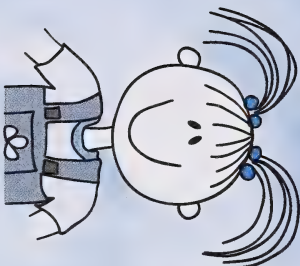
H	T	O
4	2	9
+ 3	6	2
		11

You know that 10 ones is the same as 1 ten, so write 1 ten in the tens column.

Use a chalkboard, whiteboard, or paper to demonstrate a few more examples if your student does not understand the process. Use numbers that need only the ones regrouped. Some examples you could use are as follows:

$$\begin{array}{r} 317 + 429 \\ 248 + 312 \\ 526 + 135 \end{array}$$

I add the ones, then the tens, and the hundreds last.



Your student may need guidance with this exercise. Monitor carefully to be sure the student adds the ones, then the tens, and the hundreds last. Moving from right to left is not natural for the student at first.

Now add the numbers in the tens and hundreds columns.

H	T	O
4	2	9
+ 3	6	2
7	9	1

To use this method, you must start with the ones, then add the tens, and then the hundreds.

1. Sarah and Oliver have _____ pennies altogether.

2. Add the following numbers. Add the ones first, then the tens, and then the hundreds. If there are more than 10 ones, remember to regroup them.

a.

H	T	O
4	2	6
+ 3	4	7

b.

H	T	O
5	3	4
+ 1	2	8



a.

H	T	O
2	8	3
+ 6	0	9

b.

H	T	O
1	6	5
+ 7	1	5

Sometimes you have to regroup both the ones and the tens.

3. How many pennies do Sarah's mom and dad have altogether?

You know that 10 tens is the same as 1 hundred, so write this hundred in the hundreds column.

H	T	O
1	5	3
	+ 3	8
14		1

You know that 10 ones is the same as 1 ten, so write this ten in the tens column.

Now add the columns.

H	T	O
1	5	3
	+ 3	8
9	4	1

Sarah's mom and dad have _____ pennies altogether.

Use a chalkboard, whiteboard, or paper to demonstrate a few more examples if your student does not understand. Use numbers that need both the ones and the tens regrouped. Some examples you could use are as follows:

$$\begin{array}{r} 397 + 429 \\ 248 + 372 \\ 586 + 135 \end{array}$$

4. Add the numbers in the place-value charts. Add the ones first, then the tens, and then the hundreds. If there are more than 10 ones or 10 tens, remember to regroup them. One is done for you as an example.

H	T	O
3	6	4
+2	8	8
6	5	2

H	T	O
5	2	3
+3	8	7

H	T	O
1	3	8
+4	7	3

H	T	O
6	8	4
+1	3	9

H	T	O
5	4	5
+2	6	5

Regrouping is easy when all of the numbers are lined up correctly.



Now, you can add without the place-value chart. Remember to regroup when you need to.

$$\begin{array}{r} 5. \text{ a. } 615 \\ + 348 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b. } 439 \\ + 281 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c. } 623 \\ + 192 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d. } 857 \\ + 55 \\ \hline \end{array}$$



Use the “Answer Key to the Self-Marking Activities” to check your work.

LESSON 2

There is another way to add three-digit numbers.

1. Oliver has 362 pennies and Dad has 398 pennies. What is the total number of pennies they have?



Some students find this method more logical. As the student practises, he or she will become more adept at adding the numbers mentally.



You can add the ones, add the tens, and add the hundreds to find the answer.

Add the ones:

$$2 + 8 = 10$$

Add the tens:

$$60 + 90 = 150$$

Add the hundreds:

$$300 + 300 = 600$$

Now find the total:

$$10 + 150 + 600 = 760$$

You can write it like this:

$$\begin{array}{r} 362 \quad 2 \\ + 398 \quad + 8 \\ \hline 10 \quad \leftarrow 10 \quad + 90 \quad 60 \\ 150 \quad \leftarrow 150 \quad + 300 \quad 300 \\ \hline 600 \quad \leftarrow 600 \quad + 300 \quad 600 \\ \hline 760 \end{array}$$

Oliver and Dad have a total of _____ pennies.



2. Do the following examples by adding the ones, tens, and hundreds.

a.
$$\begin{array}{r} 538 \\ + 139 \\ \hline \end{array}$$

8 30 500

↓ ↓ ↓

b.
$$\begin{array}{r} 373 \\ + 258 \\ \hline \end{array}$$

3 70 300

↓ ↓ ↓



Use the “Answer Key to the Self-Marking Activities” to check your work.



Go to Assignment Booklet 6A.

DAY 6: PRACTICE MAKES PERFECT

When you are learning a new skill or activity such as skipping, you may not be very good at it. The more you practise, the better and faster you become.

You have learned many addition strategies in Grade Three Mathematics. In today's lesson, you will use all these strategies to add three-digit numbers. The more you practise, the faster and more accurate you will become at solving problems.

You will use spinners to make three-digit numbers and add the numbers you have created. Are you ready to start?



Turn to the Cut-Out Learning Aids section in the Appendix. Carefully remove the “Sum-Fun Spinners” page and the “Sum-Fun Recording Sheet.” You will use the spinners to make three-digit numbers. Follow these instructions:

- Find three paper clips.
- First, with the tip of your pencil, hold a paper clip on the centre dot of the hundreds spinner.
- Flick the paper clip to spin. The number that it lands closest to will be your hundreds digit. Using the other paper clips and spinner cards, spin a number for the tens digit and the ones digit. Record each number on your recording sheet.



Example:

Day 6: Sum Fun
Recording Sheet

3	4	9	
+	2	3	5

- Spin a hundreds, tens, and ones digit for the second number and record these numbers on your sheet.

Do not mark the answers on the recording sheet. Your student will verify these answers on Day 8 and then send in the sheet to the teacher for marking.



- Use the strategies you have learned to add the two numbers together.
- Continue to spin in this same way to fill in the numbers on your recording sheet.

- Add the numbers to complete each problem in the same way.

- Write your name and M6-D6 on the back of the recording sheet.



Put your "Sum-Fun Recording Sheet" into your Student Folder. You will need it again on Day 8.

When you know your number facts to 18 well, you can add larger numbers more easily. Keep practising your addition facts using timed exercises, games, or flash cards.

Are you ready for your next timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you completed.



Use the "Answer Key to the Self-Marking Activities" to check your work and write the number correct. Remember to colour the number you had correct on your Math Facts Graph.

TIMED EXERCISE: 2 MINUTES

$3 + 9 = \underline{\hspace{2cm}}$	$8 + 2 = \underline{\hspace{2cm}}$	$5 + 5 = \underline{\hspace{2cm}}$	$7 + 1 = \underline{\hspace{2cm}}$	$8 + 9 = \underline{\hspace{2cm}}$	$5 + 6 = \underline{\hspace{2cm}}$
$7 + 7 = \underline{\hspace{2cm}}$	$2 + 6 = \underline{\hspace{2cm}}$	$3 + 7 = \underline{\hspace{2cm}}$	$5 + 9 = \underline{\hspace{2cm}}$	$6 + 8 = \underline{\hspace{2cm}}$	$9 + 7 = \underline{\hspace{2cm}}$
$6 + 0 = \underline{\hspace{2cm}}$	$5 + 3 = \underline{\hspace{2cm}}$	$9 + 6 = \underline{\hspace{2cm}}$	$3 + 6 = \underline{\hspace{2cm}}$	$0 + 8 = \underline{\hspace{2cm}}$	$5 + 2 = \underline{\hspace{2cm}}$

$\begin{array}{r} 9 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$
---	---	---	---	---	---

$\begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 8 \\ \hline \end{array}$
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There is no assignment in the Assignment Booklet for Day 6.

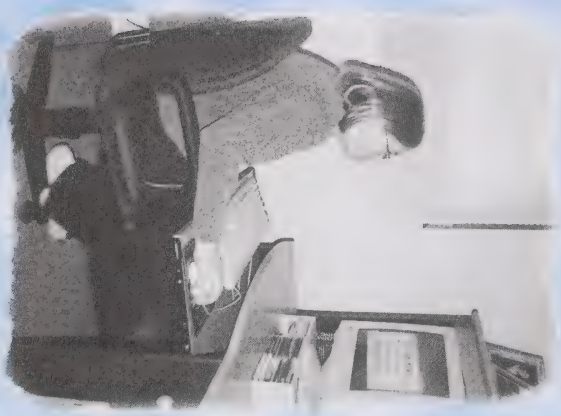
Number completed	
Number correct	





For more practice adding three-digit numbers, try these websites:

- <http://www.aaamath.com/add.html>
Find the heading "Addition." Then click on "Adding Three-Digit Numbers." The page has an explanation, interactive practice, and challenge games.
- <http://www.kidzone.ws/math>.
Choose "addition" and then "three-digit number addition."
- <http://www.dositey.com/math34.htm>
Under the "Addition and Subtraction" heading, click on "Adding Three-Digit Numbers." The step-by-step directions can help you improve your addition skills.



DAY 7: HIT THE TARGET

A basket is the target in a basketball game. A net is the target in a hockey or ringette game. Getting rid of all your cards is the target in the card game of “Go Fish.”

You may remember playing some target games in Module 2. Today you will play another target game.



DAY 7

Your student may remember playing the tossing game on Day 11 in Module 2, where you combined numbers like 100, 200, and 300 to reach 1000.

Your student may use regular playing cards instead of the cut-out number cards. If you use playing cards, remove the face cards and the tens. The ace counts as 1.

Today you will play a card game called “Hit the Target.” You will add numbers to reach a target score.

Ask your home instructor or a friend to play the game with you.

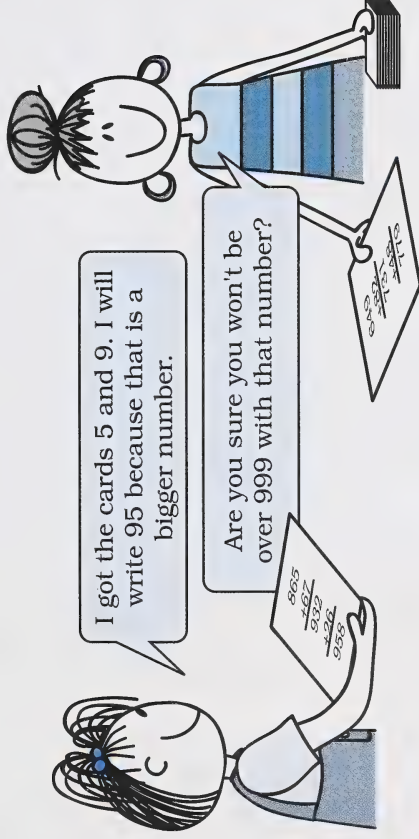
Find the “Hit the Target Number Cards” in the Appendix. Cut out the number cards.

The object of the game is to be the first one to reach the target of 999 but without going over. You will need a pencil and some paper to add your scores.

- Mix the cards, and put the cards face down in a pile between you and your partner.
- Have your partner draw two cards.
- Let your partner make a two-digit number with the cards and write the number on the paper. He or she can decide which number will be the tens digit and which will be the ones digit.
- Now it's your turn to draw two cards and write a two-digit number, in the same way.
- Now, your partner draws two more cards, makes a new number, under the first number, and adds them to find the total. You then do the same.



- You and your partner continue taking turns and adding the new numbers to the total.
- If you use all the cards, mix them again, and put them in a pile.
- The winner is the person to get closest to the target of 999 without going over.



For fun, set your own target number! Pick a number between 500 and 1000. Play the game again.



Go to Assignment Booklet 6A.

DAY 8: CALCULATOR SKILLS

It's easy to make a mistake when you are adding large numbers. It is a good idea to check the answers.

Calculators are very useful when you want to check your answers.

Today, you will use a calculator to check answers to addition problems. You will also think about the best way to solve a problem.



LESSON 1

1. You have learned three ways to check your answers in math. Can you list them?

Estimation is a quick way to see if your answer is reasonable. You practised estimating in Day 3 of this module. Estimating is often done in your mind. It does not give you an exact answer, but it does tell you if your answer is reasonable.

To check an answer exactly, you can use a calculator.



Take out your calculator.



Do you remember when Sarah made a list of the pennies her family saved?

It looked like this.

Number of Pennies

Sarah: 429
Oliver: 362
Mom: 543
Dad: 398



She told Dad that there was a total of 732 pennies. Dad said, "I think you better check again."

Do you think Sarah is right about the total? Tell your home instructor why.

Use your calculator to check Sarah's answer. After you enter each number, push **=** to get the total.

2. What is the correct answer? _____

3. Why do you think Sarah's answer is wrong? _____



Use the "Answer Key to the Self-Marking Activities" to check your work.





Take out your “Sum-Fun Recording Sheet” from Day 6.

Use the calculator to check your answers on the Recording Sheet. If any of your answers are incorrect, show them to your home instructor and explain what you think you did wrong. Put the correct answer below your first answer using a different colour of pen or pencil.



Put your “Sum-Fun Recording Sheet” back into the folder. You will send it to your teacher on Day 9.

LESSON 2

When you look at a math problem, you need to decide the best and quickest way to find the answer. Some problems can be solved in your head with mental math. Sometimes, you can estimate to find the answer. You may need to use a pencil and paper or a calculator for other problems.

Watch as your student checks the answers. If there is a mistake, help the student understand what went wrong. Have the student record the correct answer using a different colour pen or pencil.

Look at the problem below. Would you solve it in your head? Use pencil and paper? A calculator? Or estimate it?

$$300 + 95 = \underline{\hspace{2cm}}$$

I would _____.

Tell your home instructor why you would solve it that way.

Look at the following problem:

$$489 + 376 + 595 + 847 = \underline{\hspace{2cm}}$$

How would you solve it? _____

Tell your home instructor why you would solve it that way.

Now look at this problem:

$$395 + 202 \text{ is about } \underline{\hspace{2cm}}.$$

How would you solve it? _____

Tell your home instructor why you would solve it that way.



The answers to the questions may vary depending upon your student's skills. Discuss each question with your student and be sure that he or she can justify the choice.

Problems can be solved in many ways. The best and quickest way to find the answer depends on how difficult the problem is.

Mental math, or finding the answer in your head, is the quickest way to solve a problem. You probably find it easy to add numbers that end in zeros or numbers that are doubles. At times, you may not have a pencil and paper or calculator handy, so you have to solve the problem in your mind.

An **estimate** is all you need if the question does not need an exact answer. Estimates can usually be made with mental-math skills. You can also use an estimate to check if an answer is reasonable.

A **pencil and paper** can be used to figure out a simple problem quickly. A pencil and paper are usually available and easy to use.

Calculators are most useful for difficult problems or to check your work. When you use a calculator, be very careful to press the correct buttons.



Go to Assignment Booklet 6A.



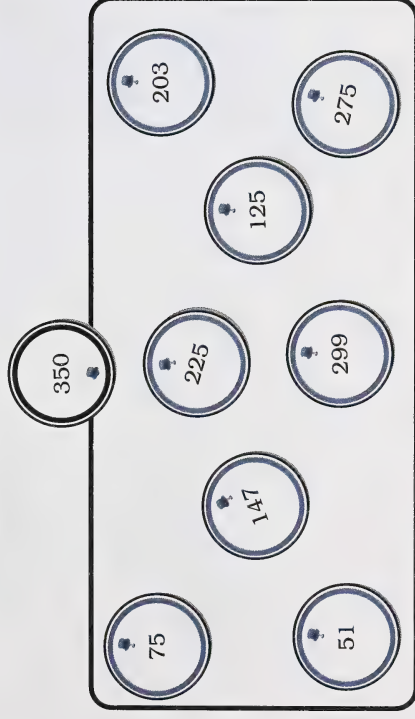
DAY 9: GUESS AND CHECK

Keshia and her dad are building a sand castle at the beach. Keshia guesses that it will take 50 blocks of sand to build the castle. She then builds the castle to check her guess.

You have used many different strategies to solve problems. Today, you will learn about the guess-and-check strategy. You will use what you know about adding large numbers to help you solve the problems in this lesson.



Earlier in this module, you added numbers to reach a target number. In the Assignment Booklet, you had to match two numbers that add up to a target number.



How did you decide which two numbers you would add first? Tell your home instructor.

For example, if your target was 350 you may have estimated which two numbers were likely to add up to 350, and then tried adding the numbers. You made a guess and then checked by adding to see if the sum was 350. This is called the guess-and-check strategy in problem solving.

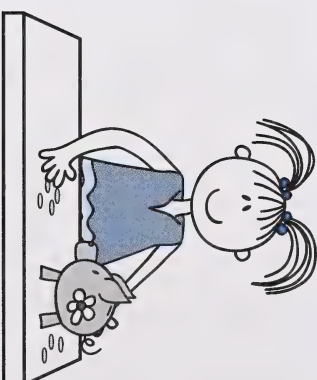
In some problems, you must use the information to make a guess or estimate, and then use the guess to calculate an answer. Sometimes you must make several guesses before you find a correct answer.

Discuss with your student how he or she solved the target exercises. Some students may have subtracted to find the pairs, but other students may have estimated and then added to check.

DAY 9

Sarah counted the number of nickels, dimes, and quarters that her family had saved. She made a chart to show how many coins there were.

	Nickels	Dimes	Quarters
Sarah	128	230	52
Oliver	85	214	38
Mom	183	227	67
Dad	169	198	115



Which two family members have a total of 297 nickels?

Understand
the
problem.

1. What do you have to find out? _____

Make
a
plan.

Use the guess-and-check strategy. Look in the chart column titled Nickels.

2. Which two numbers do you think have a sum of 297?



Try
the
plan.

Add the two numbers you chose.

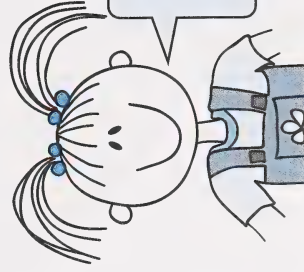
If your answer did not total 297, pick another combination and add. Keep trying until you find the right numbers.

3. Write a sentence to answer the question in the problem.

Look
back.

Reread the problem. Be sure your sentence answers the question that is asked in the problem and that the answer is reasonable.

You can often use your first guess to help you make a better guess next time.



I chose 85 and 128 the first time.
The sum was 213. I knew I
should choose a larger number
than 85 to get 297.

4. Use the problem-solving steps and the guess-and-check strategy to find the answers to the following problems. (Use Sarah's chart for the information.) Show your work. Write a sentence to answer each question.



a. Which two family members have 412 dimes altogether?

b. Who has a total of 367 nickels and dimes?





EXTENSION ACTIVITY

Would you like to try a challenging problem?

Can you find the total value of the coins that Sarah's family has saved? Use the information from Day 8 and Day 9. Use your calculator to add the numbers.

On the calculator, 1¢ is entered as .01, 5¢ is entered as .05, 10¢ is entered as .10, and 25¢ is entered as .25.



Use the "Answer Key to the Self-Marking Activities" to check your work.



Go to Assignment Booklet 6A.

When you finish the assignment for today, complete the Student's Checklist and fill out the Student's Comments before submitting your work to your teacher.

Lesson 1 in Day 8 has the list for the number of pennies the family members have saved.

Remind your student that finding the total number of coins does not give the total value of the coins. Give guidance as required.



DAY 10: SUBTRACTING LARGE NUMBERS

Alexa's grandfather cares for a large herd of bison. Several animals have to be moved to a new pasture. To find out how many buffalo are left means working with large numbers.

For the next few days, you will learn more about subtracting large numbers. What you have already learned can help you subtract three-digit numbers.



Do you remember how to solve subtraction problems like the one below?

$$76 - 35 = \underline{\hspace{2cm}}$$

Tell your home instructor how you would solve it.

You could use real objects, draw a picture, use a pencil-and-paper method, or use mental math to solve the subtraction problem.

You can use the same strategies to solve three-digit subtraction problems.

Look at the following problem:

$$758 - 633 = \underline{\hspace{2cm}}$$

You could use real objects or draw a picture, but 758 is a very large number and it would take a long time to draw or count that many objects. Grouping objects into hundreds, tens, and ones can help you count large numbers quickly. Using base ten blocks would be a quicker way to solve the problem.



Take out your base ten blocks and the place-value mat.


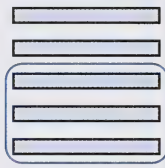

Discuss the strategy that your student would use. Most students would solve the problem using pencil-and-paper calculations.



DAY 10

Use the base ten blocks to make 758 on your place-value mat. Then take away 633.

$$758 - 633 = \underline{\hspace{2cm}}$$

Hundreds (100)	Tens (10)	Ones (1)
		

The circled blocks are the blocks that are to be subtracted.

How many do you have left?

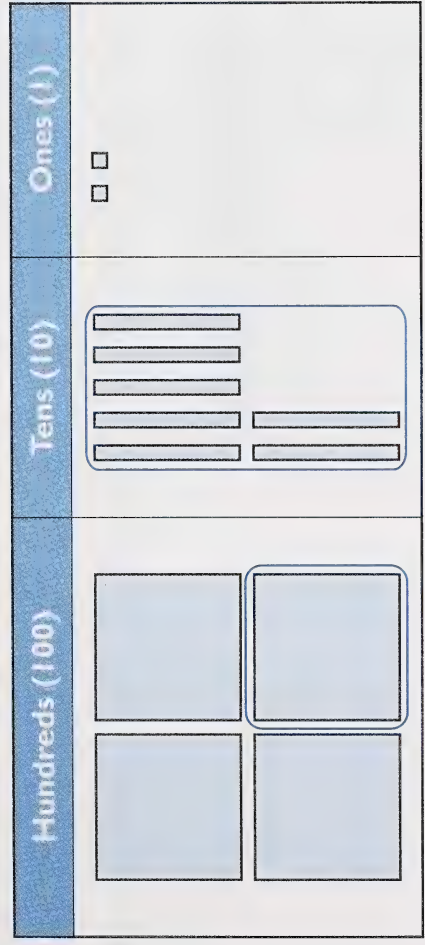
When you take away 633, you have 1 hundreds, 2 tens, and 5 ones left.

$$1. 758 - 633 = \underline{\hspace{2cm}}$$



Try this equation.

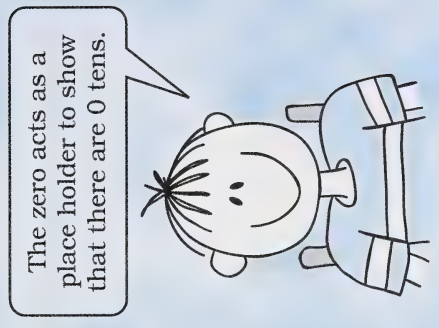
$$472 - 170 = \underline{\hspace{2cm}}$$



The circled blocks are the blocks that are to be subtracted. Notice that all the tens have been taken away.

When you take away 170, you have 3 hundreds, 0 tens, and 2 ones left. Remember to write the 0 in the tens place.

$$2. \ 472 - 170 = \underline{\hspace{2cm}}$$



3. Use your place-value mat and base ten blocks to solve the equations that follow.

a. $529 - 410 = \underline{\hspace{2cm}}$

b. $394 - 234 = \underline{\hspace{2cm}}$

c. $175 - 103 = \underline{\hspace{2cm}}$



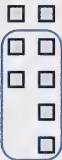
d. $257 - 133 = \underline{\hspace{2cm}}$

e. $743 - 541 = \underline{\hspace{2cm}}$

f. $438 - 308 = \underline{\hspace{2cm}}$

4. Write a complete number sentence for each of the following place-value mats. The circled blocks are the blocks that are being subtracted.

a.

Hundreds (100)	Tens (10)	Ones (1)
		



b.

Hundreds (100)	Tens (10)	Ones (1)
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Use the "Answer Key to the Self-Marking Activities" now to check your work.



DAY 10

Today, you will practise subtraction in a timed activity. Knowing the math facts to 18 helps you subtract large numbers quickly.



Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you completed.



Use the "Answer Key to the Self-Marking Activities" to check your work. Remember to colour in the number you had correct on your Math Facts Graph.



TIMED EXERCISE: 2 MINUTES

$$\begin{array}{l} 11 - 7 = \underline{\quad} \\ 8 - 5 = \underline{\quad} \\ 16 - 8 = \underline{\quad} \end{array} \quad \begin{array}{l} 17 - 9 = \underline{\quad} \\ 14 - 6 = \underline{\quad} \\ 10 - 8 = \underline{\quad} \end{array} \quad \begin{array}{l} 16 - 9 = \underline{\quad} \\ 13 - 8 = \underline{\quad} \\ 9 - 5 = \underline{\quad} \end{array} \quad \begin{array}{l} 11 - 3 = \underline{\quad} \\ 10 - 7 = \underline{\quad} \\ 11 - 6 = \underline{\quad} \end{array} \quad \begin{array}{l} 15 - 8 = \underline{\quad} \\ 9 - 6 = \underline{\quad} \\ 6 - 6 = \underline{\quad} \end{array} \quad \begin{array}{l} 7 - 5 = \underline{\quad} \\ 14 - 7 = \underline{\quad} \\ 13 - 9 = \underline{\quad} \end{array}$$

$$\begin{array}{r} 11 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$$



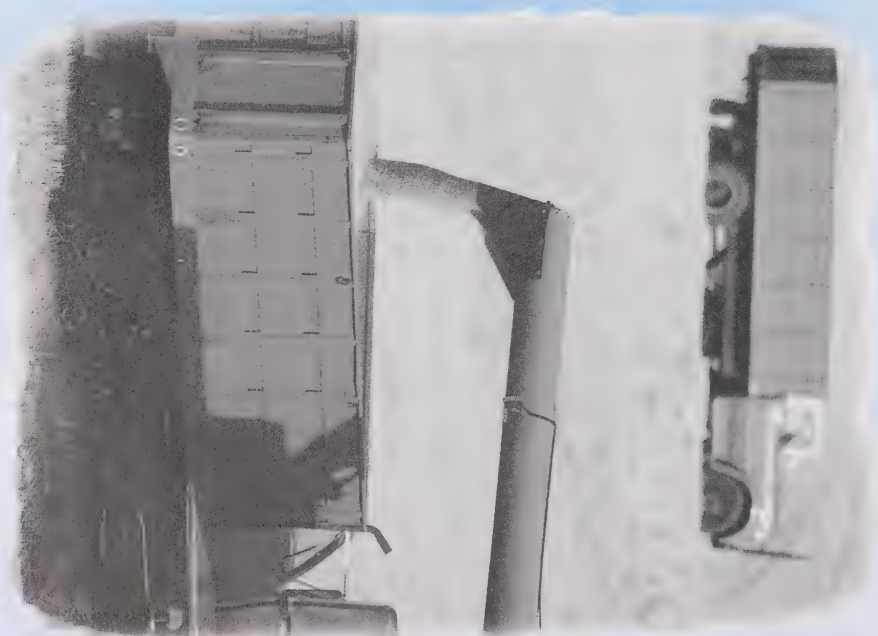
Go to Assignment Booklet 6B.

Number completed	
Number correct	

DAY 11: MORE SUBTRACTION STRATEGIES

Sarah's parents had 252 hectares of crop to harvest. They harvested 150 hectares the first week. How much crop was left to harvest? To find the answer, you have to work with subtraction and large numbers.

In today's lesson, you will use pencil-and-paper strategies in subtracting large numbers.



In grade two, you did two-digit subtraction. You learned how to write the numbers one over the other and subtract the ones and then the tens to find the answer.

1. Solve the following equation using the strategy you learned in grade two.

$$\begin{array}{r} 45 \\ - 32 \\ \hline \end{array}$$

The same strategy will work with three-digit numbers. Look at this example.

$$\begin{array}{r} 537 \\ - 221 \\ \hline \end{array}$$

At first, you may want to use a place-value chart to help you keep the hundreds, tens, and ones lined up.

H	T	O
5	3	7
- 2	2	1

Subtract the ones first, then the tens, and then the hundreds.

If your student does not remember how to do two-digit subtraction, do a few examples together on a chalkboard, whiteboard, or paper. Use examples that do not require regrouping. You may also review Day 12 of Module 1.

2. Why do you subtract the ones first? _____

Imagining the base ten blocks in your mind can help you understand how this method works.

Hundreds (100)	Tens (10)	Ones (1)

$$500 - 200 = 300$$

$$30 - 20 = 10$$

$$7 - 1 = 6$$

There are $300 + 10 + 6 = 316$ left.

3. $537 - 221 =$ _____



The circled blocks are the blocks that are to be subtracted.

4. Subtract the ones, then the tens, and then the hundreds to find each answer.

a.	H	T	O	b.	H	T	O	c.	H	T	O	d.	H	T	O
	4	6	7		7	3	9		6	8	7		2	4	6
	-1	3	5		-2	2	8		-3	4	1		-1	3	3

When you subtract, you will sometimes have an answer of zero. Be sure to write in the zero if it is in the ones or tens place. The zero acts as a place holder in these numbers.

$$\begin{array}{r} 539 \\ - 219 \\ \hline 320 \end{array}$$

$$\begin{array}{r} 427 \\ - 322 \\ \hline 105 \end{array}$$

When the zero is at the beginning of an answer, it is not necessary to write it.

$$\begin{array}{r} 667 \\ - 632 \\ \hline 035 \end{array}$$

You do not have to write in this zero. \longrightarrow 035

035 is the same as 35.



If you were writing the answer as a sentence for a problem, you would write 35, not 035.

5. Subtract the ones, then the tens, and then the hundreds to find each answer.

a.

H	T	O
3	4	7
-1	4	2

b.

H	T	O
6	3	9
-5	0	9

c.

H	T	O
4	2	5
-4	1	3

When you subtract a two-digit number from a three-digit number, line up the tens and ones correctly.

$538 - 27 = \underline{\hspace{2cm}}$

or

H	T	O
5	3	8
-	2	7
5	1	1

or

$$\begin{array}{r} 538 \\ - 27 \\ \hline 511 \end{array}$$

6. Write the numbers in the place-value charts and subtract to solve the equations.

a. $689 - 432 = \underline{\hspace{2cm}}$

H	T	O

b. $547 - 27 = \underline{\hspace{2cm}}$

H	T	O



c. $194 - 31 =$ _____

H	T	O

d. $636 - 5 =$ _____

H	T	O

7. Now try writing the following equations and solving them without using a place-value chart. Be sure that you line up the hundreds, tens, and ones correctly. The first one is set up for you.

a. $652 - 130 =$ _____

$$\begin{array}{r} 652 \\ - 130 \\ \hline \end{array}$$

b. $495 - 34 =$ _____

e. $548 - 146 =$ _____

d. $837 - 27 =$ _____

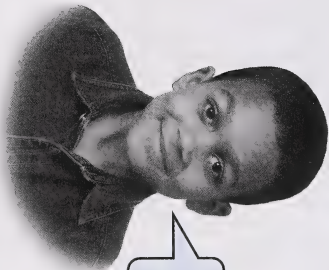
e. $396 - 194 =$ _____

f. $624 - 3 =$ _____

There are other ways to subtract large numbers.

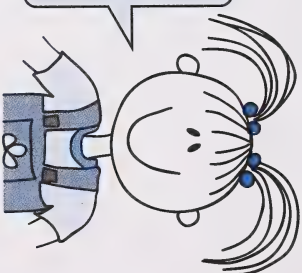
Sometimes you can add, round numbers, or do some steps in your head. Use strategies that work for you. Be sure that you can explain your strategy and tell why it will work. Do some steps in your mind when you can.

Look at some of the strategies that Sarah and her friends use. Do you use any of these strategies? Do you think that these strategies would work for you?

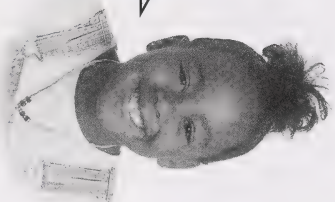


837 - 27 is easy. I know 37 - 27 is 10.
Now I add the 800, so the answer is 810.

624 - 3 = ?
I can just count back 3 to find the answer.
624 623 622 621
The answer is 621.



396 - 194 = ?
If I add 2 to 194, I get 196.
396 - 196 is 200. I added 2 at first, so I add 2 to 200.
The answer is 202.



8. Remember the harvesting problem at the beginning of today? Sarah's parents had 252 hectares of crop to harvest. They harvested 150 hectares in the first week. How much crop is left to harvest? Which subtraction strategy will you use to solve this problem? Show your work and write a sentence answer.



Use the "Answer Key to the Self-Marking Activities" to check your work.



Go to Assignment Booklet 6B.

DAY 12: SUBTRACTION WITH REGROUPING

Luke's parents have a small greenhouse. In early spring the family plants hundreds of seeds in large trays. When the plants grow enough, they are regrouped into smaller containers holding six or eight plants each. Later, the plants are regrouped again into big pots or the garden.

You know numbers can be regrouped. Earlier in this module, you regrouped numbers in addition problems. Now, you will regroup or trade hundreds, tens, and ones when you are subtracting numbers. Today, you will practise solving subtraction number sentences that need regrouping. You will use your base ten blocks to help you understand regrouping.



LESSON 1

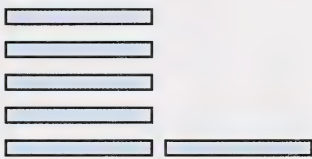



Take out your base ten blocks and your place-value mat.

In Module 1 you worked on two-digit subtraction that needed regrouping. Look at the following equation:

$$\begin{array}{r} 63 \\ - 47 \\ \hline \end{array}$$

Use your base ten blocks to show 63 on the place-value mat.

Hundreds (100)	Tens (10)	Ones (1)
		


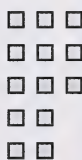
You have 6 tens and 3 ones = 63.



Now try to take away 47.

1. What do you notice? _____

You need to trade one of the tens for ten ones.

Hundreds (100)	Tens (10)	Ones (1)
		

2. How many blocks do you have now?

_____ tens and _____ ones = _____

You still have 63. You have just regrouped them.

Now take away 47. Circle the blocks to be taken away.

3. a. What do you have left?

_____ tens and _____ ones = _____

b. 63

- 47

Subtraction with regrouping was reviewed in Module 1. If your student is still having difficulty with this concept, do more examples of two-digit subtraction that require regrouping before completing the rest of this lesson.



Now try a subtraction problem with 3-digit numbers.

$$\begin{array}{r} 572 \\ - 136 \\ \hline \end{array}$$

Show 572 on your place-value mat.

Hundreds (100)	Tens (10)	Ones (1)
<div> <div></div> <div></div> <div></div> </div>	<div> <div></div><div></div><div></div><div></div><div></div> <div></div><div></div> </div>	<div> <div></div><div></div> </div>

You have 5 hundreds,
7 tens, and 2 ones = 572.



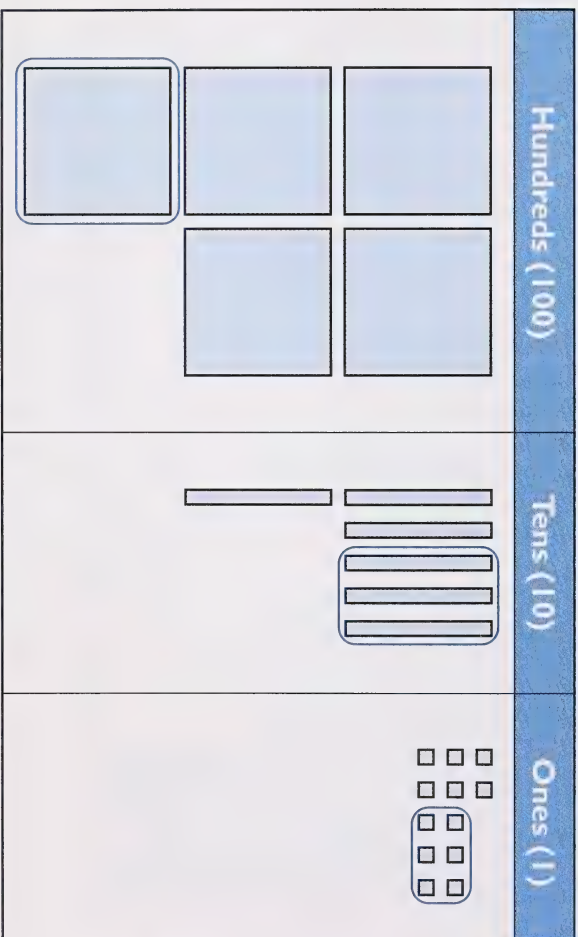
4. Try to take away 136. What do you notice? _____

Monitor the next examples carefully to be sure that your student understands that a ten must be traded in order to subtract the ones. Some students want to subtract the first number from the second. For example, the student may say, "I can't take 6 away from 2, so I'll just take 2 away from 6."

5. What will you need to do to subtract 6 ones? _____

After you have traded a tens rod for 10 ones, you have 5 hundreds, 6 tens, and 12 ones = 572.

Now take away 136. The blocks to be taken away are circled.



6. a. What do you have left?
 _____ hundreds, _____ tens, and _____ ones = _____
 b.
$$\begin{array}{r} 572 \\ - 136 \\ \hline \end{array}$$

7. Use your base ten blocks to solve each number sentence.

a. $\begin{array}{r} 345 \\ - 227 \\ \hline \end{array}$	b. $\begin{array}{r} 461 \\ - 334 \\ \hline \end{array}$	c. $\begin{array}{r} 283 \\ - 179 \\ \hline \end{array}$	d. $\begin{array}{r} 524 \\ - 205 \\ \hline \end{array}$
--	--	--	--

LESSON 2

Sometimes you need to regroup the hundreds and the tens to subtract.

$$\begin{array}{r} 327 \\ - 155 \\ \hline \end{array}$$

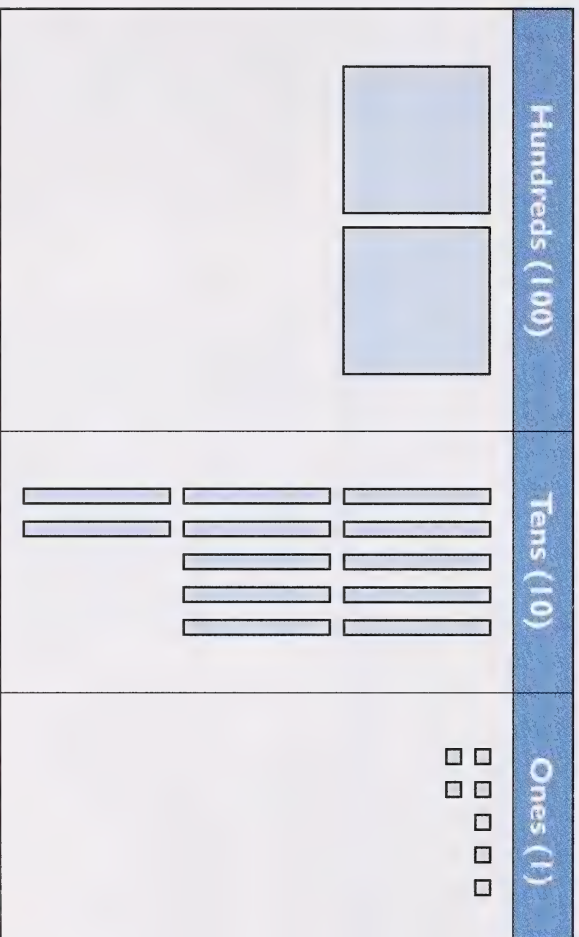
Use your base ten blocks to show 327 on the place-value mat.

Try to take away 155.



1. a. What do you notice? _____

You do not have enough tens. You will have to trade one of the hundreds flats for 10 tens.



b. Now you have _____ hundreds, _____ tens, and _____ ones.

Now take away 155. Circle the blocks that are to be subtracted.

c. You have _____ hundreds, _____ tens, and _____ ones.

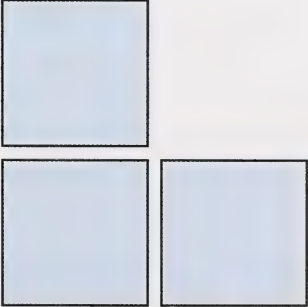


d.
$$\begin{array}{r} 327 \\ - 155 \\ \hline \end{array}$$

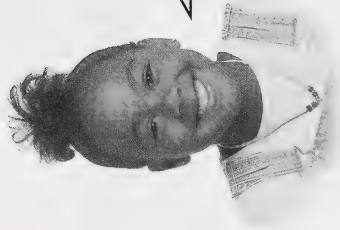


Sometimes you will need to regroup both the tens and the ones.

$$\begin{array}{r} 321 \\ - 168 \\ \hline \end{array}$$

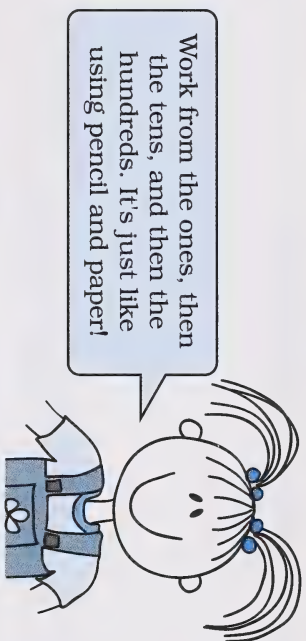
Use your base ten blocks to show 321 on the place-value mat.

Hundreds (100)	Tens (10)	Ones (1)
		



It takes two steps to solve this problem.

When you try to take 168 away, you can see that there are not enough tens or ones.



Step 1: Look at the ones column. You need more ones. First trade a tens rod for 10 ones.

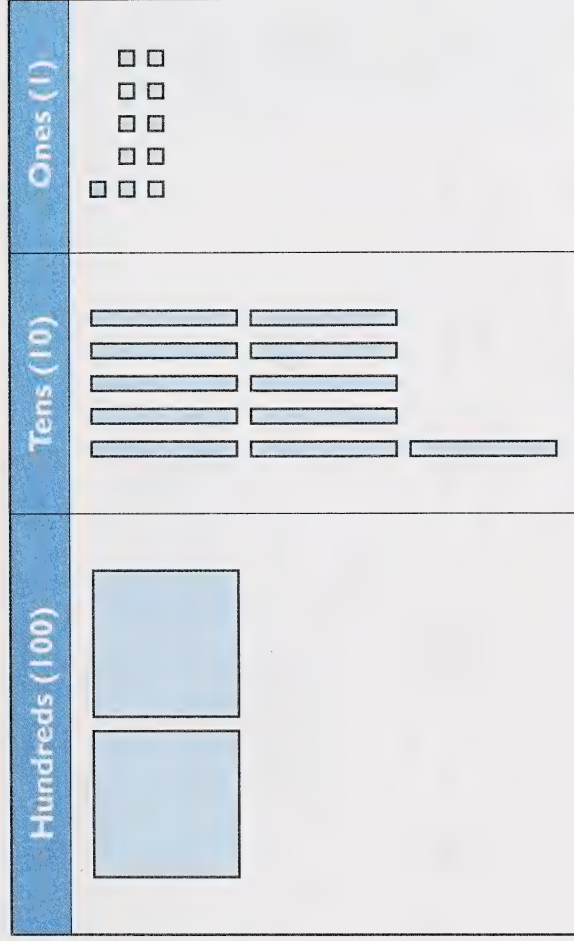
Hundreds (100)	Tens (10)	Ones (1)
<div> <div></div> <div></div> <div></div> </div>	<div> <div></div> </div>	<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>

2. a. Now you have _____ hundreds, _____ tens, and _____ ones.

You still have 321. You have just regrouped the numbers.



Step 2: Look at the tens column. You need more tens. Now trade a hundreds flat for 10 tens.



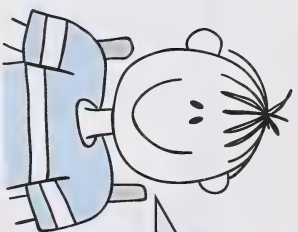
b. Now you have _____ hundreds, _____ tens, and _____ ones.

You still have 321. You have just regrouped the numbers.

Now you are ready to take away 168. Circle the blocks that are being subtracted.

c.
$$\begin{array}{r} 321 \\ - 168 \\ \hline \end{array}$$

This is a difficult step for many students. Carefully monitor your student's work through this section.



What do I do if my first number ends in two zeros?

Look at the following equation:

$$300 - 135 = \underline{\hspace{2cm}}$$

Use your base ten blocks to show 300 on the place-value mat. You will have 3 hundreds, 0 tens, and 0 ones.



Try to take 135 away.

3. a. What do you notice?

You can't trade tens for ones because there are no tens. You have to go to the hundreds column.

Trade a hundreds flat for 10 tens.




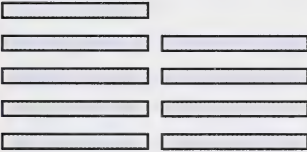
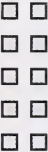
Hundreds (100)	Tens (10)	Ones (1)
		

This diagram shows that a hundreds flat has been traded for 10 tens. You now have 10 tens.



You now have 2 hundreds and 10 tens and 0 ones. You still have 300. However, you still cannot subtract 135. You have no ones.

You need to trade one of the tens for 10 ones.

Hundreds (100)	Tens (10)	Ones (1)
		

This diagram shows that a tens rod has been traded for 10 ones. You now have 10 ones.



If your student needs more practice trading hundreds for tens and then tens for ones, provide extra questions.

b. Now you have _____ hundreds, _____ tens, and _____ ones.

c. Do you still have 300? _____

Now you are ready to take away 135. Circle the blocks that are being subtracted.

d. $300 - 135 =$ _____

4. Use your base ten blocks to solve these number sentences. Sometimes you will need to trade tens for ones or hundreds for tens. Sometimes you may need to trade both.

a.	415	b.	262	c.	523	d.	600
	$- 284$		$- 145$		$- 377$		$- 192$
	_____		_____		_____		_____



Use the "Answer Key to the Self-Marking Activities" to check your work.



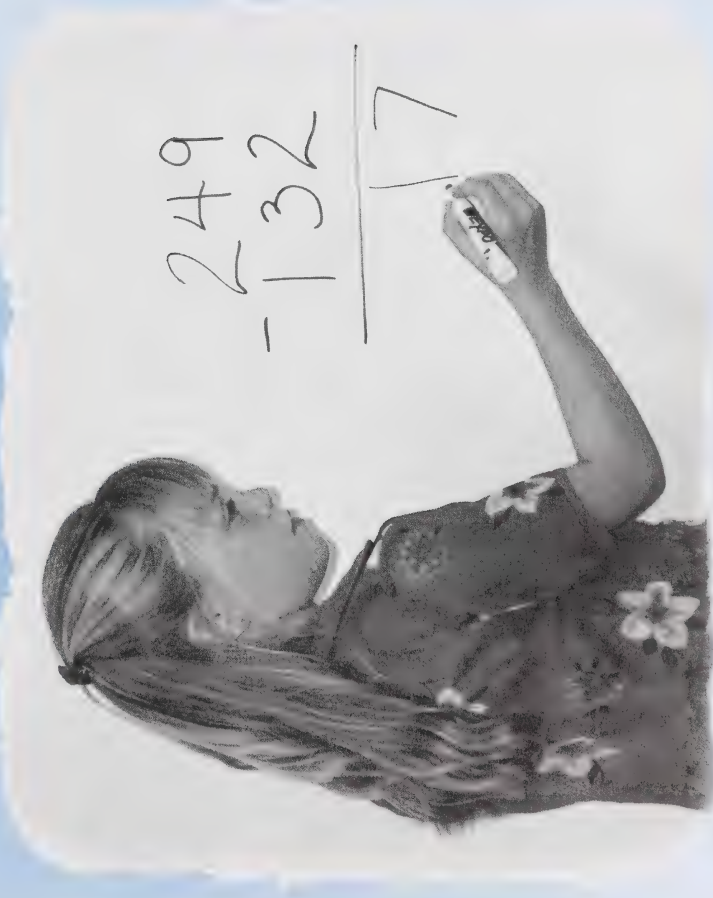
Go to Assignment Booklet 6B.



DAY 13: ANOTHER WAY

You have done subtraction problems without regrouping by using a pencil-and-paper method.

Subtraction problems with regrouping can also be solved using a pencil-and-paper method. Are you ready to solve more subtraction problems? Sharpen your pencil for some new problems!



The pencil-and-paper method of solving subtraction problems can be used to show regrouping.

Do you remember how you showed regrouping with two-digit subtraction?

$$\begin{array}{r} 83 \\ - 27 \\ \hline \end{array}$$

Look at the numbers in the ones column. You will notice that you can't take 7 away from 3. You will need to trade a ten for 10 ones. You may use a place-value chart to help you.

You have taken a ten, so now the 8 in the tens column is crossed off. Write a small 7 to show you have 7 tens now.

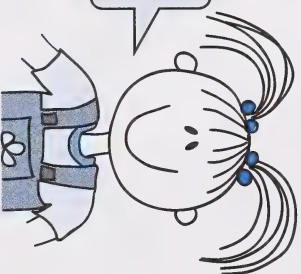
T	O
8 ⁷	¹ 3
- 2	7

Show that you have traded a ten for 10 ones by putting a 1 (for 1 ten) by the 3. Now you have 13 ones.

Now you are ready to subtract. Subtract the ones column and then the tens column.

T	O
8 ⁷	¹ 3
- 2	7
5	6

83 - 27 = ?
13 - 7 is 6. 7 - 2 is 5.
So, 83 - 27 is 56.



Three-digit numbers can be subtracted the same way. Look at the following:

$$\begin{array}{r} 454 \\ - 248 \\ \hline \end{array}$$

Look at the numbers in the ones column. You can't take 8 away from 4. You will need to regroup.

H	T	O
4	⁴ 5	¹ 4
-2	4	8

You must trade a ten for 10 ones by putting a 1 by the 4 in the ones column. Now you have 14 ones. You took a ten so the 5 in the tens column is crossed off and a small 4 is written to show that you now have 4 tens.

Now you are ready to subtract.

1. Subtract to find the answer.

H	T	O
4	⁴ 5	¹ 4
-2	4	8



If necessary, take out the base ten blocks and show the student how the numbers represent the process of regrouping. Allow the student to use both the base ten blocks and the written method together for as long as necessary.

Monitor your student carefully as these equations are solved. If necessary, show the student again how to use written notation to show regrouping.

2. Solve each equation by trading a ten for ones. Show your work.

a.

H	T	O
3	7	5
-2	3	6

b.

H	T	O
5	6	2
-3	4	9

c.

H	T	O
8	6	0
-4	3	4

Sometimes, you need to trade a hundred for 10 tens. Look at the following equation:

$$\begin{array}{r} 437 \\ - 265 \\ \hline \end{array}$$

Look at the numbers in the ones column first. You can take 5 away from 7 so you won't have to regroup. $7 - 5 = 2$. Now look at the tens column. You can't take 60 away from 30. You will need to trade a hundred for 10 tens.

H	T	O
4 ³	¹ 3	7
-2	6	5
		2

You can show that you have traded a hundred by putting a 1 (for 100) by the 3. Now you have 13 tens (or 130). You have taken a hundred so cross off the 4 in the hundreds column and write a small 3 above it.



3. Finish the subtraction to find the answer.

H	T	O
³ 7	¹ 3	7
-2	6	5
		2

Sometimes you need to regroup the hundreds, tens, and ones. Look at the following equation:

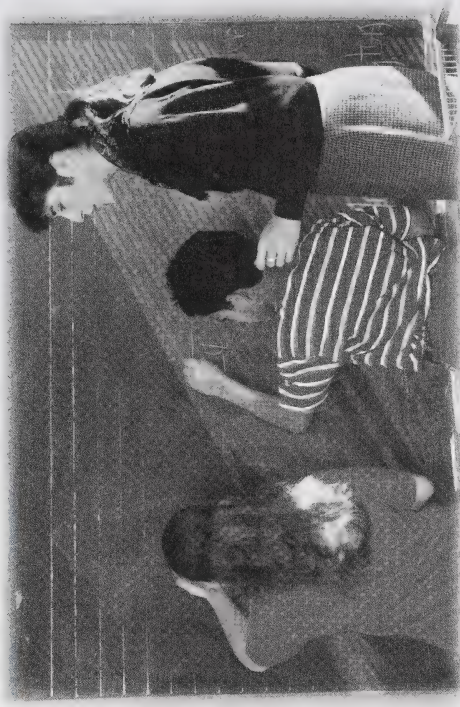
$$\begin{array}{r} 723 \\ - 249 \\ \hline \end{array}$$

Look at the numbers in the ones column. You can't take 9 away from 3. You will have to regroup a ten.

H	T	O
7	¹ 2	¹ 3
-2	4	9

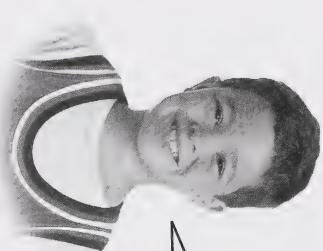
Show you traded a ten for 10 ones by putting a 1 (for 10) by the 3. You now have 13 ones. You have taken a ten so cross off the 2 in the tens column and write a small 1 above it.

Now, look at the numbers in the tens column. You can't take 40 away from 10. You will need to trade a hundred for 10 tens.



4. Subtract to find the answer.

H	T	O
6	11	¹ 3
- 2	4	9



I showed that I traded a hundred for 10 tens by putting a small 1 (for 100) by the one in the tens column. Because I took a hundred, I crossed out the 7 in the hundreds column and wrote a small 6 above it.

What do you do if there is a zero in the first number? Try this problem:

$$400 - 273 = \underline{\hspace{2cm}}$$

H	T	O
4	0	0
- 2	7	3

Look at the numbers in the ones column in the place-value chart. You can't take 3 away from 0. You need to trade a ten for ten ones. When you look at the tens column, you notice there are no tens. You will have to go all the way to the hundreds column to trade. This will take two steps.

STEP ONE: Trade a hundred for 10 tens.

H	T	O
³ 4	¹ 0	0
- 2	7	3

STEP TWO: Trade a ten for 10 ones.

H	T	O
³ 4	¹⁰ 0	¹ 0
- 2	7	3



Now you are ready to subtract.

5.

H	T	O
³ 4	¹⁰ 0	¹ 0
- 2	7	3

Monitor the student as these problems are solved. If necessary, show the student the correct notation and continue to use base ten blocks to illustrate the process.

6. Use the pencil-and-paper method to show regrouping. Subtract to find the answer.

H	T	O
5	8	3
-2	9	1

H	T	O
6	1	5
-1	5	0

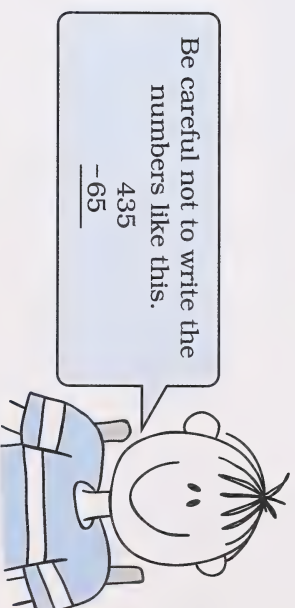
H	T	O
3	3	4
-1	5	8

H	T	O
3	6	9
-	9	2

H	T	O
9	0	0
-6	8	5

Monitor the student as problems are written vertically. Compare the student's alignment of numbers to the place-value chart if necessary.

When you understand how to regroup, you will not need to use the place-value chart or base ten blocks. If you write the numbers one over the other to solve the equation, be sure to line up the ones, tens, and hundreds.



7. Solve the subtraction number sentences using your favourite strategy. When you are finished, tell your home instructor how you solved each equation.

a. $673 - 429 =$ _____

b. $329 - 147 =$ _____

c. $412 - 57 =$ _____

d. $920 - 300 =$ _____

Did you use different strategies to solve the number sentences? You will find it helpful to learn and practise a variety of strategies for solving all types of number equations.



Use the "Answer Key to the Self-Marking Activities" to check your work.



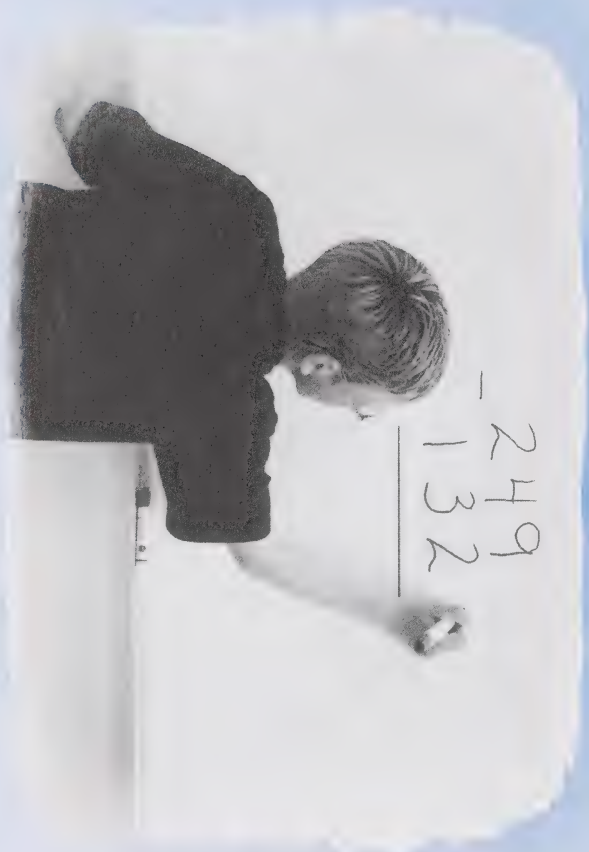
Go to Assignment Booklet 6B.

Ask your student to explain how he or she chose to solve each problem. Were a variety of strategies used or did the student use one strategy all the time?

DAY 14: CHECKING ANSWERS

It's easy to make a mistake when you are adding or subtracting numbers with many digits. It's a good idea to check your answers to be sure they are correct.

Today, you will practise using estimation to check your answers. You will also use subtraction to check addition answers and addition to check subtraction answers. Do you remember how to do that?



LESSON 1

Using estimation is a quick way to be sure that your answer is reasonable. On Day 3 of this module, you practised estimating in addition problems.

When you estimate, you usually round the numbers to the nearest hundred or ten. If you forget how to round numbers, go back to Day 3 in this Student Module Booklet and review the lesson.

1. Round each number to the nearest hundred and estimate the answer.

a. $321 \xrightarrow{\text{round to}} \underline{\hspace{2cm}}$

$- 95 \xrightarrow{\text{round to}} - \underline{\hspace{2cm}}$ $\xrightarrow{\text{estimated difference}} \underline{\hspace{2cm}}$

b. $634 \xrightarrow{\text{round to}} \underline{\hspace{2cm}}$

$- 387 \xrightarrow{\text{round to}} - \underline{\hspace{2cm}}$ $\xrightarrow{\text{estimated difference}} \underline{\hspace{2cm}}$

If your student does not recall how to round numbers to the nearest hundred or ten, review Day 3 of this module with him or her.

c. $692 \xrightarrow{\text{round to}} \underline{\hspace{2cm}}$

$$\begin{array}{r} - 103 \\ \hline \end{array} \xrightarrow{\text{round to}} \begin{array}{r} - \underline{\hspace{2cm}} \\ \hline \end{array} \xrightarrow{\hspace{2cm}} \begin{array}{r} \underline{\hspace{2cm}} \\ \hline \end{array} \xrightarrow{\hspace{2cm}} \begin{array}{r} \underline{\hspace{2cm}} \\ \hline \end{array}$$

estimated
difference

With a little practice, you can estimate in your head. Use this method to help you decide if an answer is reasonable.

2. Fill in the circle that shows the best estimated difference for each number sentence. Then, show your work beside each question.

a. $593 - 215 = \underline{\hspace{2cm}}$

- ☐ 400
☐ 300
☐ 200

b. $921 - 178 = \underline{\hspace{2cm}}$

- ☐ 400
☐ 600
☐ 700

c. $305 - 89 = \underline{\hspace{2cm}}$

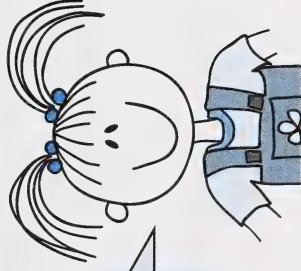
- ☐ 100
☐ 200
☐ 300

d. $669 - 490 = \underline{\hspace{2cm}}$

- ☐ 400
☐ 300
☐ 200



Sometimes, you may want a closer estimate. You can round to the nearest ten. Rounding to the nearest ten will give you a closer estimate.



It's hard to regroup in your head. I try to round so that I won't have to regroup.

3. Fill in the circle that shows the best estimated difference. Show your work beside each question.

a. $581 - 54 =$ _____

- ☐ 550
- ☐ 540
- ☐ 530

b. $676 - 327 =$ _____

- ☐ 380
- ☐ 350
- ☐ 320

Tell your home instructor about your estimation strategy for these questions.

After your student has completed these exercises, ask that he or she explain how the estimation was done. You may want to discuss how you would have estimated.



LESSON 2

In Module 1, you learned how to use the opposite or **inverse** operation to check your work. When you learned about fact families, you found out how addition and subtraction are related. You can use addition to check your subtraction answers.

Go back to Day 9 and Day 17 in Module 1 if you want to review these lessons. You can use subtraction to check addition answers.

You can check to see if a subtraction calculation is correct by adding.

$$\begin{array}{r} 624 \\ - 363 \\ \hline 261 \end{array}$$

Add the last two numbers of the equation. Your answer should be the same as the first number in the equation.

$$\begin{array}{r} 363 \\ + 261 \\ \hline 624 \end{array}$$

The answer is correct.



1. Add the last two numbers of each equation to check these subtraction problems. Write on the line if the answer is correct or incorrect.

Example:

$$\begin{array}{r} 479 \\ - 246 \\ \hline 233 \end{array}$$

$$\begin{array}{r} 246 \\ + 233 \\ \hline 479 \end{array}$$

The answer is _____ correct
(correct, incorrect)

a. $\begin{array}{r} 573 \\ - 254 \\ \hline 321 \end{array}$

The answer is _____
(correct, incorrect)

b. $\begin{array}{r} 920 \\ - 375 \\ \hline 545 \end{array}$

The answer is _____
(correct, incorrect)

c. $161 - 37 = 124$

The answer is _____
(correct, incorrect)

d. $704 - 295 = 509$

The answer is _____
(correct, incorrect)

You may suggest rewriting horizontal equations vertically if your student shows difficulty in choosing the numbers to be added.

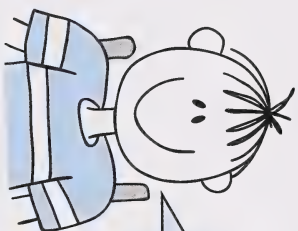
You can check addition problems by subtracting.

$$\begin{array}{r} 584 \\ + 298 \\ \hline 882 \end{array}$$

Subtract the second addend from the sum. You should get the first number in the equation.

$$\begin{array}{r} 882 \\ - 298 \\ \hline 584 \end{array}$$

The answer is correct.



I see! That's like working backward through the equation.

- Subtract the second addend from the sum to check these addition problems. Put a check mark (✓) beside the correct answers and an ex (X) beside the incorrect answers.

Look at these two examples:

$$\begin{array}{r} 532 \\ + 227 \\ \hline 758 \end{array} \quad \begin{array}{r} 758 \\ - 227 \\ \hline 531 \end{array}$$

$$\begin{array}{r} 758 \\ + 227 \\ \hline 531 \end{array} \quad \begin{array}{r} 531 \\ - 108 \\ \hline 409 \end{array}$$

$$\begin{array}{r} 517 \\ - 108 \\ \hline 409 \end{array}$$

$$\begin{array}{r} 344 \\ + 53 \\ \hline 397 \end{array}$$

$$\begin{array}{r} 629 \\ + 170 \\ \hline 889 \end{array}$$

$$\begin{array}{r} 93 \\ + 196 \\ \hline 289 \end{array}$$

$$\begin{array}{r} 508 \\ + 275 \\ \hline 773 \end{array}$$





Use the "Answer Key to the Self-Marking Activities" to check your work.



For more practice solving subtraction questions, try the site you visited for addition practice:

• <http://www.aaamath.com/>

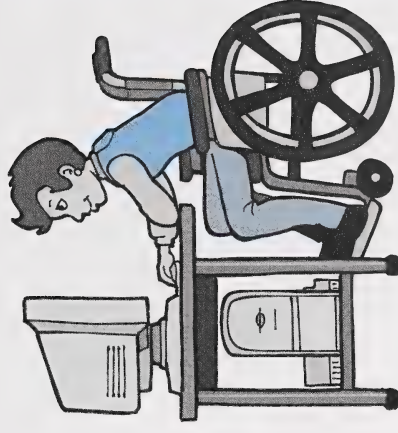
From the list of Math topics, choose Subtraction. A variety of subtraction activities will appear. Choose "Equation—Three Digit."

Some other topics you may find helpful are "Subtracting Hundreds," "Using Estimation," "Mental Math," "Pencil and Paper," "Calculator," or "Place Value."

Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you completed.



Use the "Answer Key to the Self-Marking Activities" to check your work. Remember to colour in the number you got correct on your Math Facts Graph.



TIMED EXERCISE: 2 MINUTES

$$14 - 5 = \underline{\hspace{2cm}}$$

$$16 - 8 = \underline{\hspace{2cm}}$$

$$12 - 5 = \underline{\hspace{2cm}}$$

$$13 - 4 = \underline{\hspace{2cm}}$$

$$15 - 8 = \underline{\hspace{2cm}}$$

$$11 - 9 = \underline{\hspace{2cm}}$$

$$17 - 9 = \underline{\hspace{2cm}}$$

$$13 - 8 = \underline{\hspace{2cm}}$$

$$14 - 6 = \underline{\hspace{2cm}}$$

$$10 - 4 = \underline{\hspace{2cm}}$$

$$11 - 8 = \underline{\hspace{2cm}}$$

$$12 - 6 = \underline{\hspace{2cm}}$$

$$16 - 10 = \underline{\hspace{2cm}}$$

$$10 - 5 = \underline{\hspace{2cm}}$$

$$11 - 2 = \underline{\hspace{2cm}}$$

$$12 - 3 = \underline{\hspace{2cm}}$$

$$13 - 5 = \underline{\hspace{2cm}}$$

$$14 - 7 = \underline{\hspace{2cm}}$$

$$\begin{array}{r} 9 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 9 \\ \hline \end{array}$$



Go to Assignment Booklet 6B.



GRADE THREE MATHEMATICS

Number completed	
Number correct	

DAY 15: SARAH'S TRIP

Sarah is going on a trip. You will use some of the things you have learned to help Sarah solve problems about her trip. Use your favourite strategies to find solutions to the problems.

Your challenge will be to think of other math problems Sarah may have about her trip.

Can you think of math problems you may encounter on a trip you might like to take?



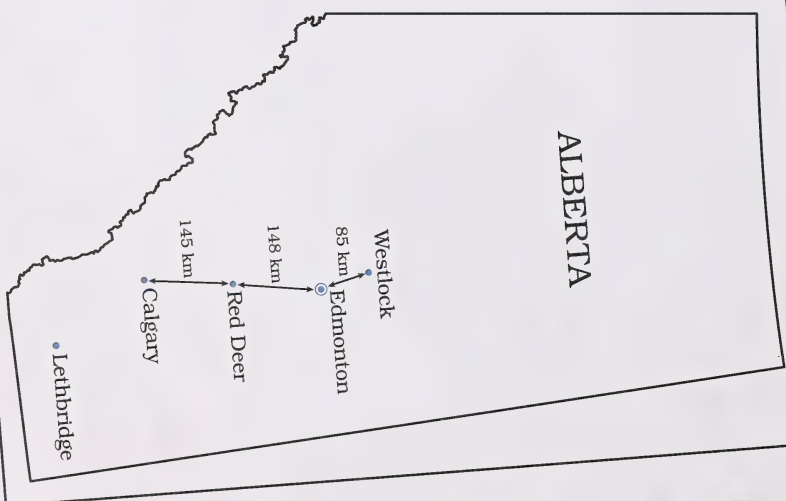
DAY 15

Discuss with your student the types of math problems that may occur on a trip; for example, you may calculate distance between destinations, elapsed time, or the cost of purchases as you travel.

Have you ever gone on a trip with your family? What kind of math problems did you and your family have to solve as you travelled? Tell your home instructor.

Sarah lives near Westlock. Her grandparents live near Lethbridge.

Sarah and her family are taking a trip to visit her grandparents. The map shows their route and the distances between different places.



If your student is still having difficulty with problem-solving activities, go through each problem-solving step orally as the student solves the problem. Help your student choose a method to solve the problem.

1. Look at the map of Alberta on the previous page to find the distances between towns and cities. Use the problem-solving steps and your favourite strategies to find the answers. Show your work. Write a sentence to answer the question.



- a. Sarah and her family had lunch in Red Deer. How many kilometres is it from Westlock to Red Deer?

- b. The family stopped in Calgary to visit the zoo. How far had they travelled from Westlock?



c. The total distance from Westlock to Lethbridge is 594 kilometres. How far is it from Calgary to Lethbridge?

2. When the family went to the zoo they saw this sign.



a. Sarah, Oliver, Mom, and Dad all wanted to go to the zoo. How much did it cost? (Sarah and Oliver are both more than 6 years old.)





EXTENSION ACTIVITIES

Plan a road trip. Write down the names of several cities or places you would like to visit. Ask your home instructor to help you find the distance chart on a map. Choose some or all of these activities to do:

- Find the distance from your home to each place you'd like to visit.
- Plan the route you would take to visit all the places in one trip. Calculate the total distance.
- Calculate how many hours of driving it would take to make the entire trip. (Hint: You can usually travel about 100 km in an hour of highway driving.)
- Make up math problems about your trip for a friend or family member to answer.
- Find out some number facts about the places you want to visit. You can find information on the Internet or at a travel information centre.
- Use the number facts you found to make up some math problems.

Go to Assignment Booklet 6B.



DAY 16: WORKING WITH MONEY

Sarah is visiting her friends Jeremy and Don in Barrhead. They are going to see the afternoon movie and will be buying some snacks.

Many of the activities you do in real life involve money. You will learn how to add and subtract money and solve money problems in today's lessons.



Your student may enjoy using real or play money to help solve the problems.

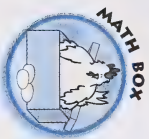
LESSON 1

You probably know that there are two ways to write about money. For example, if you have 59 pennies, you can write the amount using a cent sign or a dollar sign.

59¢ or **\$0.59**

Both ways are read fifty-nine cents.

The amount \$0.59 has a 0 to tell you that there are zero dollars and fifty-nine cents.



Find a sales flyer.

Look at the flyer. Find some prices that are less than one dollar. Is a ¢ sign or a \$ sign used? Tell your home instructor.

When there are dollars and cents, only the dollar sign is used. For example, one dollar and fifteen cents is written \$1.15.

\$1.15




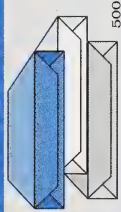



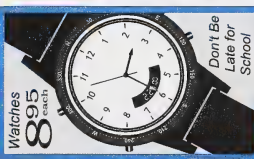
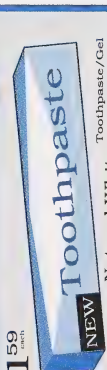


The dollar sign comes first.  This dot is called a **decimal point**. 

Your student will first find items that cost less than one dollar. Then have your student tell you which notation the flyer uses to show cents.



The numbers before the decimal point tell how many dollars there are. The numbers after the decimal point tell how many cents there are. A decimal point is a dot that separates the whole number from the fractional part of a number. In other words, it separates dollars from cents.

Look at your flyer. Read the prices of ten items aloud to your home instructor. Then read aloud the prices of the items in the following flyer.

DRUG STORE		School Days	
 <p>Hand Lotion 450-600 ml 3⁹⁹ each</p>	 <p>Pencil Set HB #2 8-pencil set 2⁹⁵ each</p>	 <p>ALL SIZES Stapler and staples 3⁹⁵ each</p>	 <p>Printer Paper 500 sheets per package 4⁶⁹ each</p>
 <p>Toothbrush 3-pack 4⁹⁹ each</p>	 <p>Extra-Shine Shampoo and Conditioner 600 ml 1⁹⁹ each</p>	 <p>Solar Calculators 9⁹⁹ each</p>	 <p>Watches 8⁹⁵ each</p>
 <p>NEW Toothpaste/Gel Natural White 150 ml 1⁵⁹ each</p>	 <p>Toothbrush 1⁵⁹ each</p>	 <p>Don't Be Late for School</p>	

Read aloud each of the following amounts and then write it in words.

Example: \$3.29 _____ three dollars and twenty-nine cents

1. \$5.65 _____

2. \$8.90 _____

3. \$0.52 _____

4. \$8.00 _____

5. \$1.83 _____



Use the "Answer Key to the Self-Marking Activities" to check your work.

LESSON 2

Money equations can be added and subtracted in the same way you solve number sentences. Look at the menu.

How much would you pay for a hamburger and a glass of milk? You need to add the two amounts to find the total.

$$\$2.00 + \$1.05 = \underline{\hspace{2cm}}$$

Menu	
Macaroni and Cheese	\$3.49
Hamburger	\$2.00
Hot Dog	\$1.50
Juice	\$0.99
Milk	\$1.05



You could use real or play money, put the amounts together, and count the total. You could also solve the equation by writing one amount over the other and adding the ones, tens, and hundreds (dollars).

When working with money problems, remember to write a decimal point to show you are working with money. Also, write a dollar sign. Follow the numbers in the example.

$$\begin{array}{r}
 \$2.00 \\
 + \$1.05 \\
 \hline
 \$3.05
 \end{array}$$

¹ Add the cents.
² Write a decimal point to show you are working with money.
³ Add the dollars.
⁴ Write the dollar sign.

You would pay \$3.05 for a hamburger and milk.

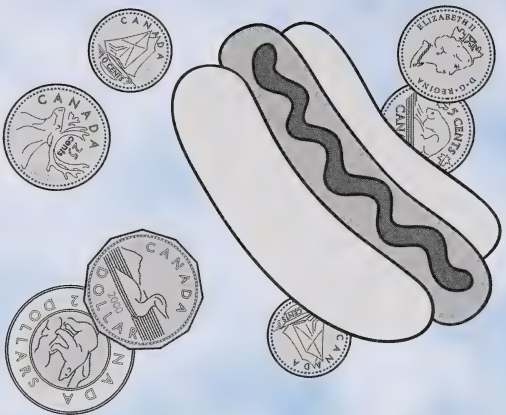
Sometimes you need to regroup the numbers. For example, how much would you pay for a hot dog and juice? You need to add to find out the total.

$$\begin{array}{r}
 \$1.50 \\
 + \$0.99 \\
 \hline
 \$2.49
 \end{array}$$

A hot dog and juice will cost \$2.49.



You have to regroup the cents in the tens column. 100¢ is \$1.



You may use real or play money to illustrate the problem. You can also use base ten blocks.

You can subtract amounts of money in the same manner.

You have \$5.00. You buy a hot dog. How much money do you have left?

$$\$5.00 - \$1.50 = ?$$

$$\begin{array}{r} \$5.00 \\ - \$1.50 \\ \hline \$3.50 \end{array}$$

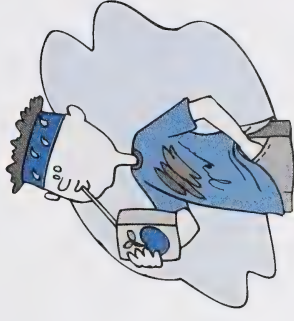
You would have \$3.50 left.

Solve these problems. Use the menu from the beginning of Lesson 2. Show your work. Write a sentence to answer the question.

1. How much would you pay for macaroni and cheese and a glass of milk?

2. How much would a hot dog and milk cost?

3. If you had \$5.00 and bought a juice, how much money would you get back?



Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you completed.



Use the "Answer Key to the Self-Marking Activities" to check your work. Remember to colour in the number you got correct on the Math Facts Graph.

TIMED EXERCISE: 2 MINUTES

$$11 - 5 = \underline{\quad}$$

$$17 - 7 = \underline{\quad}$$

$$16 - 8 = \underline{\quad}$$

$$11 - 4 = \underline{\quad}$$

$$15 - 6 = \underline{\quad}$$

$$17 - 9 = \underline{\quad}$$

$$18 - 9 = \underline{\quad}$$

$$14 - 8 = \underline{\quad}$$

$$13 - 6 = \underline{\quad}$$

$$10 - 6 = \underline{\quad}$$

$$9 - 8 = \underline{\quad}$$

$$14 - 5 = \underline{\quad}$$

$$16 - 7 = \underline{\quad}$$

$$10 - 4 = \underline{\quad}$$

$$9 - 2 = \underline{\quad}$$

$$11 - 3 = \underline{\quad}$$

$$6 - 5 = \underline{\quad}$$

$$13 - 7 = \underline{\quad}$$

$$\begin{array}{r} 10 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 9 \\ \hline \end{array}$$



Go to Assignment Booklet 6B.

Number completed	
Number correct	



DAY 17: WHAT'S MISSING?

Perhaps you have watched games where the people had to hit a target.

Do you remember playing games where you had to reach a target sum? Finding a missing number in a number sentence can help you reach a target, too.

You will learn more about missing numbers in today's lessons.



LESSON 1

Look at the number sentence below:

$$7 + \underline{\hspace{2cm}} = 15$$

How could you find the missing number? Tell your home instructor.

Finding a missing number in an equation is like finding a target sum. You need to think about what you would add to 7 to reach 15.

Think about the fact family you would use to write these number sentences.

$$7 + \underline{\hspace{2cm}} = 15 \qquad \underline{\hspace{2cm}} + 7 = 15$$

$$15 - \underline{\hspace{2cm}} = 7 \qquad 15 - 7 = \underline{\hspace{2cm}}$$

If you know your addition facts well, you could probably remember what you add to 7 to get 15. You can also think about the related subtraction fact to find the missing number.

$$15 - 7 = \underline{\hspace{2cm}}$$

1. Fill in the missing number.

$$7 + \underline{\hspace{2cm}} = 15$$

Your student may suggest counting on, subtracting, or remembering the related addition fact.



2. Find the missing number to make each equation correct.

a. $5 + \underline{\hspace{2cm}} = 13$

b. $\underline{\hspace{2cm}} + 7 = 16$

c. $3 + \underline{\hspace{2cm}} = 10$

d. $9 + \underline{\hspace{2cm}} = 17$

You can find a missing number in subtraction equations, too.

$15 - \underline{\hspace{2cm}} = 9$

Think about the related facts:

$9 + \underline{\hspace{2cm}} = 15$

$\underline{\hspace{2cm}} + 9 = 15$

$15 - 9 = \underline{\hspace{2cm}}$

3. Find the missing number.

$15 - \underline{\hspace{2cm}} = 9$

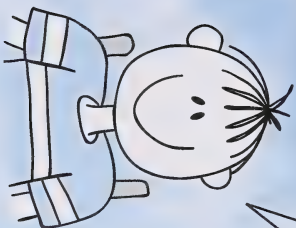
What do you do if the first number in a subtraction equation is missing?

$\underline{\hspace{2cm}} - 5 = 8$

Discuss with the student how most equations require finding the missing number after the equal sign. These equations have a number missing before the equal sign. Knowing the related facts helps to solve the missing number.



I know that $8 + 5 = 13$, so it's easy to solve $\underline{\quad} - 5 = 8$. The answer is $13 - 5 = 8$.



Think about all the related facts. Which ones can help you find the missing number?

$$\underline{\quad} - 5 = 8$$

$$\underline{\quad} - 8 = 5$$

$$8 + 5 = \underline{\quad}$$

$$5 + 8 = \underline{\quad}$$

You know $8 + 5 = 13$, so $13 - 5 = 8$.

4. Fill in the missing numbers.

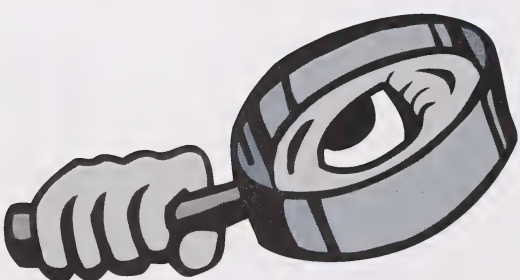
a. $16 - \underline{\quad} = 8$

b. $\underline{\quad} - 3 = 6$

c. $12 - \underline{\quad} = 7$

d. $\underline{\quad} - 8 = 2$

e. $11 - \underline{\quad} = 6$



Use the "Answer Key to the Self-Marking Activities" to check your work.

LESSON 2

You can also find the missing numbers in two-digit or three-digit equations.

$$\begin{array}{r} 43 \\ + \quad \square \\ \hline 85 \end{array}$$

How could you find the missing number? Tell your home instructor your plan.

You probably don't remember what you would add to 43 to get 85. The easiest way to find the answer is to think of the related subtraction fact.

$$\begin{array}{r} 85 - 43 = \underline{\quad} \quad \text{or} \quad \begin{array}{r} 85 \\ - 43 \\ \hline \end{array} \end{array}$$

1. Find the answer.

$$\begin{array}{r} 43 \\ + \quad \square \\ \hline 85 \end{array}$$

Your student may suggest some of the same strategies discussed in Lesson 1. Discuss how practical the ideas would be. For example, if your student suggests counting on, talk about how difficult it would be to keep track of that many numbers.



2. Use the related subtraction fact to find each of the missing numbers. Show your work.

a. $71 + \underline{\hspace{2cm}} = 123$

b. $\underline{\hspace{2cm}} + 55 = 79$

c. $103 + \underline{\hspace{2cm}} = 215$

d. $342 + \underline{\hspace{2cm}} = 478$

To find the missing number in a subtraction equation, think of the related addition sentence.

$$\begin{array}{r} 738 \\ - \quad \quad \\ \hline 101 \end{array}$$

$$\begin{array}{r} 738 \\ - \quad \quad \\ \hline 101 \end{array}$$

3. Fill in the missing number.



The related addition sentence is
 $? + 101 = 738$
 If I subtract $738 - 101$,
 I should get the answer.



4. Use the related addition sentence to find the missing number.

$$\underline{\hspace{2cm}} - 45 = 50$$

5. Find the missing number for each equation. Use the related addition facts. Show your work.

a. $\underline{\hspace{2cm}} - 126 = 141$

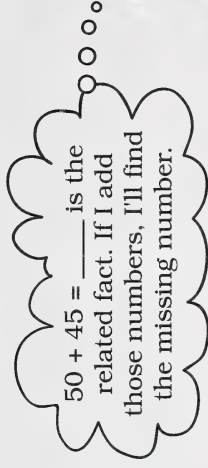
b. $735 - \underline{\hspace{2cm}} = 215$

c. $\underline{\hspace{2cm}} - 84 = 33$

d. $157 - \underline{\hspace{2cm}} = 42$



Use the "Answer Key to the Self-Marking Activities" to check your work.

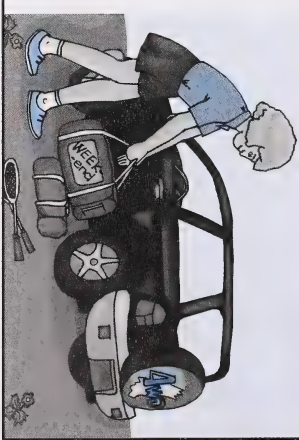


$50 + 45 = \underline{\hspace{1cm}}$ is the related fact. If I add those numbers, I'll find the missing number.

LESSON 3

Understanding missing numbers can help you solve problems, too.

Sarah had some spending money for the trip to Lethbridge. She spent 43 dollars on the trip. She had 7 dollars left when she got home. How much money did she have to start with?



Understand the problem.

You need to find out how much money Sarah had when she began the trip.

Make a plan.

One way to think about this is to write a number sentence with a missing number.

How much money did Sarah have to start with? \longrightarrow $- \$43 = \7 \longleftarrow Sarah had this much left.

Sarah spent this much.



1. You can find the missing number by _____.



2. - 43 = \$7

3. Answer the question.

Sarah had _____ dollars at the beginning of the trip.



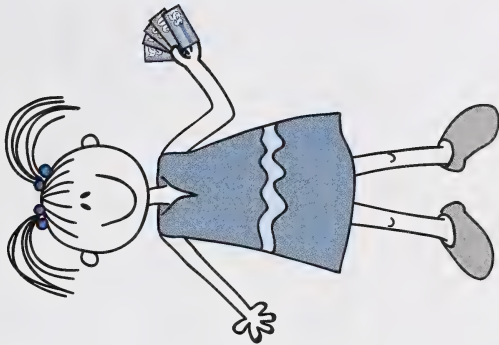
Reread the problem. Does your answer seem reasonable? Did you answer the question from the problem? Did you write your answer in a sentence?



Use the "Answer Key to the Self-Marking Activities" to check your work.



Go to Assignment Booklet 6B.



DAY 18: LOOKING BACK

Today, you will show your teacher what you have learned about adding and subtracting large numbers by completing some review questions in your Assignment Booklet. You may want to look back through your Student Module Booklet if you have difficulty with any of the questions.

You will also do a timed exercise to send to your teacher.

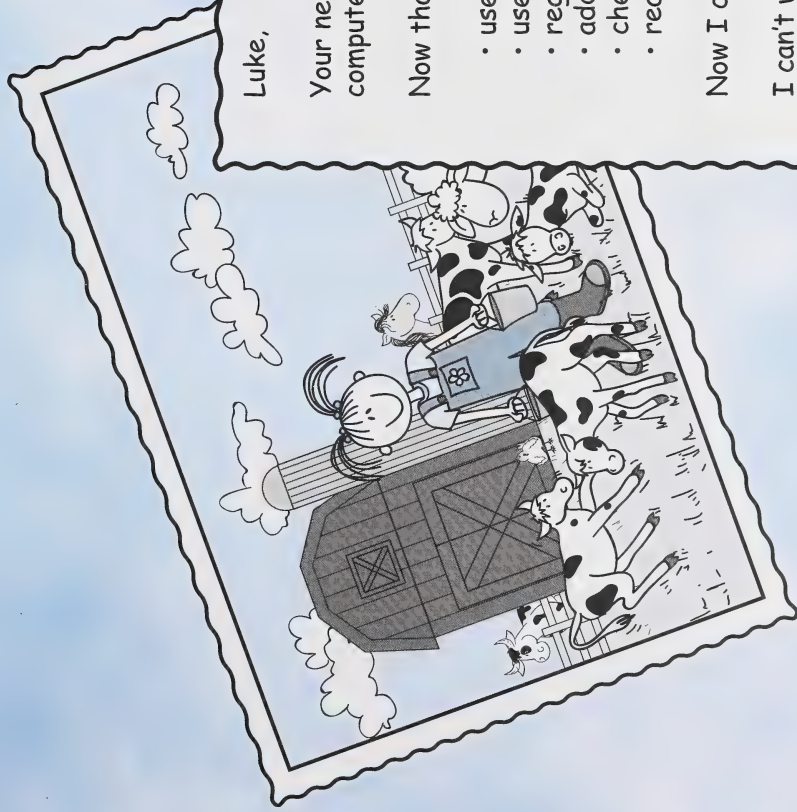


Go to Assignment Booklet 6B. When you have completed the assignments for Day 18, read what Sarah wrote to Luke to recall all you have learned in Module 6. Finally, complete the Student's Checklist and Student's Comments before you submit your work to the teacher.



SUMMARY

It is Sarah's turn to write back to Luke.



Luke,

Your new wheelchair sounds great! My family will be getting a computer soon. Then I will be able to send you e-mail.

Now that I've finished Module 6, I can

- use base ten blocks to add and subtract large numbers
- use pencil and paper to add and subtract large numbers
- regroup numbers when I add and subtract
- add and subtract large numbers to solve problems
- check my work by estimating or using the opposite operation
- read and write about money

Now I can keep better track of my money when I go shopping.

I can't wait for you to visit and see our new baby animals.

Sarah





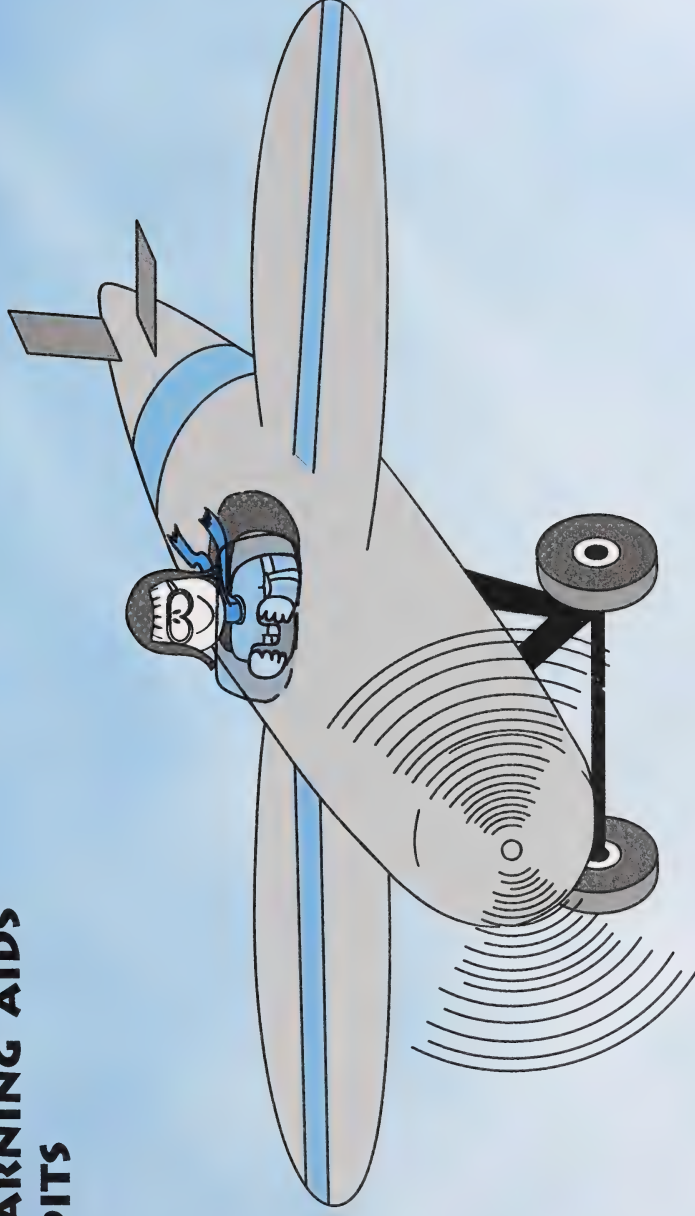
APPENDIX

GLOSSARY

ANSWER KEY TO THE SELF-MARKING ACTIVITIES

CUT-OUT LEARNING AIDS

IMAGE CREDITS



GLOSSARY

decimal point: a dot or point that separates the whole number from the fractional part of a number or that separates dollars from cents

Example: \$3.57

decimal point

inverse: opposite



ANSWER KEY TO THE SELF-MARKING ACTIVITIES

DAY 1: LESSON 1

1. a. $24 + 53 = 77$
b. You may have used real objects or base ten blocks, drawn a picture, counted on, written the equation up and down, or added the ones and then the tens in your mind.
2. a. Yes
b. No. It would take too long to count out that many pennies or buttons.
c. Yes
d. Yes. The base ten blocks are in groups, so it is much quicker and easier to count them.
3. a. $227 + 341 = 568$
b. You may have used base ten blocks, drawn a picture, added them in your mind, or written the equation up and down to add the ones, tens, and hundreds.
4. The strategies that would work best are
 - using base ten blocks
 - writing the equation up and down so you can add the ones, tens, and hundreds
 - adding the hundreds, tens, and ones in your mind



DAY 1: LESSON 2

DAY 1: LESSON 2

1. **5** hundreds, **6** tens, **8** ones or **568**

2. a. $300 + 439 = 739$

b. $522 + 174 = 696$

c. $243 + 405 = 648$

d. $140 + 354 = 494$

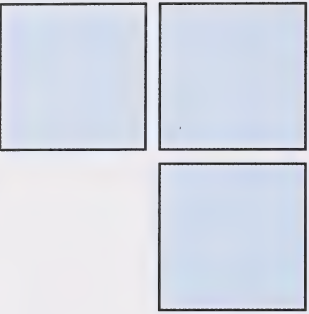


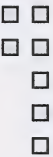
e. $213 + 426 = 639$

f. $169 + 610 = 779$

3. $312 + 406 = 7$ hundreds, **1** tens, and **8** ones, or **718**.

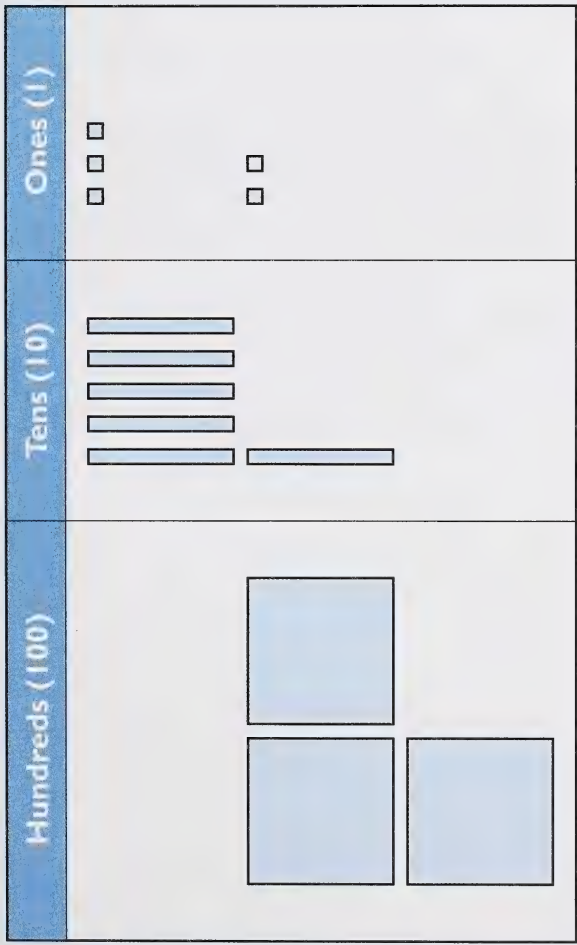
Now I can see that the answer is **718**.

4. a. $210 + 157 = 367$

Hundreds (100)	Tens (10)	Ones (1)
	 	



b. $53 + 312 = 365$



c. $181 + 405 = 586$

d. $322 + 105 = 427$

DAY 2: LESSON 1

DAY 2: LESSON 1

1. a.

H	T	O
1	4	7
+2	3	2
3	7	9

b.

H	T	O
2	0	4
+3	9	4
5	9	8

c.

H	T	O
6	3	2
+3	1	5
9	4	7

d.

H	T	O
4	2	6
+1	5	3
5	7	9

e.

H	T	O
5	0	4
+2	0	1
7	0	5

$$2. 345 + 53 = 398$$

or

$$\begin{array}{r} 345 \\ + 53 \\ \hline 398 \end{array}$$

or

H	T	O
3	4	5
+	5	3
3	9	8



3. a. $62 + 123 = 185$

62	
+ 123	
185	

or

H	T	O
	6	2
+ 1	2	3
1	8	5

b. $811 + 105 = 916$

811	
+ 105	
916	

or

H	T	O
8	1	1
+ 1	0	5
9	1	6

c. $946 + 13 = 959$

946	
+ 13	
959	

or

H	T	O
9	4	6
+	1	3
9	5	9



DAY 2: LESSON 1

d. $67 + 402 = 469$ or

$$\begin{array}{r} 67 \\ + 402 \\ \hline 469 \end{array}$$

or

H	T	O
	6	7
+ 4	0	2
4	6	9

e. $156 + 830 = 986$ or

$$\begin{array}{r} 156 \\ + 830 \\ \hline 986 \end{array}$$

or

H	T	O
1	5	6
+ 8	3	0
9	8	6

f. $90 + 109 = 199$ or

$$\begin{array}{r} 90 \\ + 109 \\ \hline 199 \end{array}$$

or

H	T	O
	9	0
+ 1	0	9
1	9	9



4. a. $\begin{array}{r} 612 \\ + 27 \\ \hline 639 \end{array}$	b. $\begin{array}{r} 703 \\ + 291 \\ \hline 994 \end{array}$	c. $\begin{array}{r} 157 \\ + 702 \\ \hline 859 \end{array}$	d. $\begin{array}{r} 521 \\ + 65 \\ \hline 586 \end{array}$
--	--	--	---

DAY 2: LESSON 2

- | | | | |
|--|---|---|---|
| 1. • $500 + 300 = 800$
• $400 + 45 = 445$ | • $100 + 400 = 500$
• $34 + 200 = 234$ | • $600 + 200 = 800$
• $20 + 100 = 120$ | • $300 + 200 = 500$
• $500 + 39 = 539$ |
| 2. • $196 + 20 = 216$
• $498 + 10 = 508$ | • $395 + 40 = 435$
• $297 + 50 = 347$ | | |

DAY 3: LESSON 1

- | | | |
|------------------|---------------|-----------------------------|
| 1. a. 520 | b. 680 | c. 210 |
| 2. a. 400 | b. 490 | c. 690 d. 800 |
3. The number in the tens place is **6**.
4. Rounded to the nearest hundred, 363 is **400**.
- | | | | |
|------------------|---------------|---------------|---------------|
| 5. a. 600 | b. 100 | c. 500 | d. 400 |
|------------------|---------------|---------------|---------------|

DAY 3: LESSON 2

DAY 3: LESSON 2

1.
$$\begin{array}{r} 451 \\ + 234 \\ \hline \end{array}$$

$$\underline{685}$$

2. Yes, 685 is reasonable. It is close to 700, the estimated answer.

3. a.
$$\begin{array}{r} 365 \\ + 132 \\ \hline \end{array}$$

round to the nearest hundred
round to the nearest hundred

$$\begin{array}{r} 400 \\ + 100 \\ \hline \end{array}$$

$$\underline{497} \leftarrow \text{exact answer}$$

$$\underline{500} \leftarrow \text{estimated answer}$$

b.
$$\begin{array}{r} 443 \\ + 333 \\ \hline \end{array}$$

round to the nearest hundred
round to the nearest hundred

$$\begin{array}{r} 400 \\ + 300 \\ \hline \end{array}$$

$$\underline{776} \leftarrow \text{exact answer}$$

$$\underline{700} \leftarrow \text{estimated answer}$$

4. a.
$$\begin{array}{r} 683 \\ + 102 \\ \hline \end{array}$$

round to the nearest ten
round to the nearest ten

$$\begin{array}{r} 680 \\ + 100 \\ \hline \end{array}$$

$$\underline{785} \leftarrow \text{exact answer}$$

$$\underline{780} \leftarrow \text{estimated answer}$$



$$\begin{array}{r} \text{b. } 412 \\ + 355 \\ \hline 767 \end{array} \quad \begin{array}{l} \text{round to the nearest ten} \\ \text{round to the nearest ten} \end{array} \quad \begin{array}{r} 410 \\ + 360 \\ \hline 770 \end{array} \quad \begin{array}{l} \text{exact answer} \\ \text{estimated answer} \end{array}$$

$$\begin{array}{r} \text{c. } 264 \\ + 621 \\ \hline 885 \end{array} \quad \begin{array}{l} \text{round to the nearest ten} \\ \text{round to the nearest ten} \end{array} \quad \begin{array}{r} 260 \\ + 620 \\ \hline 880 \end{array} \quad \begin{array}{l} \text{exact answer} \\ \text{estimated answer} \end{array}$$

DAY 3: LESSON 3

1. a. You need to find how many packages of balloons the class need to buy.
 b. If you round the number of students to the nearest hundred, you would get **400**.
 c. Luke's class will need **400 + 400 = 800** balloons.
 d. There are 100 balloons in a package, so the class will need **8** packages.
2. a. You need to find out if they have at least 361 candies.
 b. $220 + 110 = 330$ candies
 c. No, they do not have enough candies. They need 361 candies and they have an estimate of 330 candies. They need about 30 more candies.

DAY 4: LESSON 1 AND DAY 4: LESSON 2

DAY 4: LESSON 1

1. 693 $500 + 90 + 3$

$600 + 90 + 3$

$600 + 40 + 3$

2. 389 3 hundreds, 5 tens,
and 9 ones

3 hundreds, 8 tens,
and 9 ones

3. 230 $100 + 130$ $200 + 3$

$100 + 10 + 10$

4. 841 8 hundreds, 3 tens,
and 11 ones

8 hundreds, 4 tens,
and 11 ones

DAY 4: LESSON 2

1. a. There are **3** hundreds, **5** tens, and **11** ones.

b. Now you have **3** hundreds, **6** tens, and **1** ones.

c. $124 + 237 = \mathbf{361}$

d. Maria's score is **361**.

2. a. There are **2** hundreds, **12** tens, and **9** ones.

b. Another way of writing this is **200 + 120 + 9**.

c. There are more than 10 tens in the tens column.

d. You should change 10 tens for a hundreds flat.

e. Another name for 2 hundreds, 12 tens, and 9 ones is **3** hundreds, **2** tens, and **9** ones.

f. Jorli's score is **329**.



3. a. There are **3** hundreds, **12** tens, and **11** ones.
 b. Another way of writing this is **300 + 120 + 11**.
 c. Now there are **3** hundreds, **13** tens, and **1** ones.
 d. Now there are **4** hundreds, **3** tens, and **1** ones.
 e. Sonia's score is 431.
 f. If you changed the tens first, you might have to change them again after you changed the ones.

4. a. Ling: 124 and 268 Total score: **392**

b. Justin: 237 and 255 Total score: **492**

c. Fatima: 176 and 268 Total score: **444**

d. Tom: 153 and 176 Total score: **329**

e. Rafael: 202 and 268 Total score: **470**

5. **Justin**



DAY 4 AND DAY 5: LESSON 1

Timed Exercise Answers

$3 + 4 = 7 \quad 8 + 8 = 16 \quad 5 + 3 = 8 \quad 7 + 6 = 13 \quad 8 + 4 = 12 \quad 5 + 6 = 11$

$7 + 5 = 12 \quad 2 + 7 = 9 \quad 3 + 6 = 9 \quad 5 + 4 = 9 \quad 6 + 8 = 14 \quad 9 + 2 = 11$

$6 + 9 = 15 \quad 5 + 5 = 10 \quad 9 + 9 = 18 \quad 3 + 8 = 11 \quad 0 + 3 = 3 \quad 5 + 8 = 13$

$$\begin{array}{r} 9 \\ +4 \\ \hline 13 \end{array} \quad \begin{array}{r} 7 \\ +3 \\ \hline 10 \end{array} \quad \begin{array}{r} 8 \\ +1 \\ \hline 9 \end{array} \quad \begin{array}{r} 6 \\ +5 \\ \hline 11 \end{array} \quad \begin{array}{r} 4 \\ +6 \\ \hline 10 \end{array} \quad \begin{array}{r} 8 \\ +7 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 8 \\ +2 \\ \hline 10 \end{array} \quad \begin{array}{r} 6 \\ +6 \\ \hline 12 \end{array} \quad \begin{array}{r} 6 \\ +7 \\ \hline 13 \end{array} \quad \begin{array}{r} 9 \\ +5 \\ \hline 14 \end{array} \quad \begin{array}{r} 4 \\ +7 \\ \hline 11 \end{array} \quad \begin{array}{r} 7 \\ +8 \\ \hline 15 \end{array}$$

DAY 5: LESSON 1

1. Sarah and Oliver have **791** pennies altogether.

2. a.	H	T	O	b.	H	T	O	c.	H	T	O	d.	H	T	O
	4	2	6		5	3	4		2	8	3		1	6	5
	+3	4	7		+1	2	8		+6	0	9		+7	1	5
	7	7	3		6	6	2		8	9	2		8	8	0



3. Sarah's mom and dad have **941** pennies altogether.

4. a.

H	T	O
$\overset{1}{5}$	$\overset{1}{2}$	3
+ 3	8	7
9	1	0

c.

H	T	O
$\overset{1}{6}$	$\overset{1}{8}$	4
+ 1	3	9
8	2	3

d.

H	T	O
$\overset{1}{5}$	$\overset{1}{4}$	5
+ 2	6	5
8	1	0

5. a.

$\overset{1}{615}$
+ 348
963

c.

$\overset{1}{623}$
+ 192
815

d.

$\overset{1}{857}$
+ 55
912

DAY 5: LESSON 2

1. Oliver and Dad have a total of **760** pennies.

2. a.

538	8
+ 139	+ 9
$\overset{1}{17} \leftarrow \overset{1}{17}$	+ 30
60	60
$\overset{1}{600} \leftarrow \overset{1}{600}$	+ 100
677	600

b.

373	3
+ 258	+ 8
$\overset{1}{11} \leftarrow \overset{1}{11}$	+ 50
120	120
$\overset{1}{500} \leftarrow \overset{1}{500}$	+ 200
631	500

DAY 6

DAY 6

You used three spinners to make up numbers for your Sum-Fun Recording Sheet. You used the strategies you learned to add pairs of numbers. Did you have fun doing the activity? Did you remember to put the sheet in your Student Folder?

Timed Exercise Answers

$$3 + 9 = 12 \quad 8 + 2 = 10 \quad 5 + 5 = 10 \quad 7 + 1 = 8 \quad 8 + 9 = 17 \quad 5 + 6 = 11$$

$$7 + 7 = 14 \quad 2 + 6 = 8 \quad 3 + 7 = 10 \quad 5 + 9 = 14 \quad 6 + 8 = 14 \quad 9 + 7 = 16$$

$$6 + 0 = 6 \quad 5 + 3 = 8 \quad 9 + 6 = 15 \quad 3 + 6 = 9 \quad 0 + 8 = 8 \quad 5 + 2 = 7$$

$$\begin{array}{r} 9 \\ + 2 \\ \hline 11 \end{array} \quad \begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array} \quad \begin{array}{r} 8 \\ + 3 \\ \hline 11 \end{array} \quad \begin{array}{r} 6 \\ + 7 \\ \hline 13 \end{array} \quad \begin{array}{r} 4 \\ + 9 \\ \hline 13 \end{array} \quad \begin{array}{r} 8 \\ + 6 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 8 \\ + 5 \\ \hline 13 \end{array} \quad \begin{array}{r} 6 \\ + 4 \\ \hline 10 \end{array} \quad \begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 9 \\ + 9 \\ \hline 18 \end{array} \quad \begin{array}{r} 4 \\ + 5 \\ \hline 9 \end{array} \quad \begin{array}{r} 7 \\ + 8 \\ \hline 15 \end{array}$$



DAY 7

There are no activities to mark today. You played the “Hit the Target” game with your home instructor or a friend. Were you able to find any mistakes in the other player’s adding? Did you win? Did you enjoy playing the game?

DAY 8: LESSON 1

1. The answers may be in any order:
 - Estimate.
 - Use a calculator.
 - Use the opposite operation (use subtraction to check addition).
2. The correct answer is 1732.
3. Sarah forgot the 1 in the thousands place.

Reminder: You used your calculator to check the answers on your Sum-Fun Record Sheet. You corrected any mistakes using a different colour pen or pencil. You will submit this sheet to your teacher at the end of Day 9.



DAY 8: LESSON 2 AND DAY 9

DAY 8: LESSON 2

There are no activities to mark in this lesson. You discussed different ways of solving problems. Did you discover that you use many ways of solving different problems? Do you think you use the best and quickest way to find answers?

DAY 9

1. You have to find out which two family members have a total of 297 nickels.
2. You may have guessed and picked any **one** of these combinations:

$$128 + 85$$
$$85 + 183$$

$$128 + 183$$
$$85 + 169$$

$$128 + 169$$
$$183 + 169$$

You may have tried any of these combinations:

$$128 + 85 = 213$$
$$85 + 183 = 268$$

$$128 + 183 = 311$$
$$85 + 169 = 254$$

$$128 + 169 = 297$$
$$183 + 169 = 352$$

3. Sarah and her dad have a total of 297 nickels. ($128 + 169 = 297$)



4. a. You may have tried any of these combinations:

$$\begin{array}{lll} 230 + 214 = 444 & 230 + 227 = 457 & 230 + 198 = 428 \\ 214 + 227 = 441 & 214 + 198 = 412 & 227 + 198 = 425 \end{array}$$

Oliver and his dad have 412 dimes in all. ($214 + 198 = 412$)

b. You may have tried any of these combinations:

$$128 + 230 = 358 \quad 85 + 214 = 299 \quad 183 + 227 = 410 \quad 169 + 198 = 367$$

Dad has a total of 367 nickels and dimes. ($169 + 198 = 367$)

Extension Activity

Sarah's family saved as follows:

• 1732 pennies	= 1732×0.01	or	\$ 17.32
• 565 nickels	= 565×0.05	or	\$ 28.25
• 869 dimes	= 869×0.10	or	\$ 86.90
• 272 quarters	= 272×0.25	or	\$ 68.00
Total			<u>\$200.47</u>

Sarah's family saved a total of \$200.47 in coins.

DAY 10

DAY 10

1. $758 - 633 = 125$

2. $472 - 170 = 302$

3. a. $529 - 410 = 119$

b. $394 - 234 = 160$

c. $175 - 103 = 72$

d. $257 - 133 = 124$

e. $743 - 541 = 202$

f. $438 - 308 = 130$

4. a. $458 - 236 = 222$

b. $775 - 54 = 721$

Timed Exercise Answers

$11 - 7 = 4$

$17 - 9 = 8$

$16 - 9 = 7$

$11 - 3 = 8$

$15 - 8 = 7$

$7 - 5 = 2$

$8 - 5 = 3$

$14 - 6 = 8$

$13 - 8 = 5$

$10 - 7 = 3$

$9 - 6 = 3$

$14 - 7 = 7$

$16 - 8 = 8$

$10 - 8 = 2$

$9 - 5 = 4$

$11 - 6 = 5$

$6 - 6 = 0$

$13 - 9 = 4$

11

12

14

11

15

9

-5

-7

-8

-4

-7

-8

6

5

6

7

8

1

13

12

11

10

6

18

-6

-8

-9

-2

-3

-9

7

4

2

8

3

9



DAY 11

$$\begin{array}{r} 1. \quad 45 \\ - 32 \\ \hline 13 \end{array}$$

2. You subtract the ones first because you may need to regroup tens to make more ones.

3. $537 - 221 = 316$

$$\begin{array}{r} 4. \text{ a.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 4 & 6 & 7 \\ - 1 & 3 & 5 \\ \hline 3 & 3 & 2 \end{array} \end{array}$$

$$\begin{array}{r} \text{b.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 7 & 3 & 9 \\ - 2 & 2 & 8 \\ \hline 5 & 1 & 1 \end{array} \end{array}$$

$$\begin{array}{r} \text{c.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 6 & 8 & 7 \\ - 3 & 4 & 1 \\ \hline 3 & 4 & 6 \end{array} \end{array}$$

$$\begin{array}{r} \text{d.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 2 & 4 & 6 \\ - 1 & 3 & 3 \\ \hline 1 & 1 & 3 \end{array} \end{array}$$

$$\begin{array}{r} 5. \text{ a.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 3 & 4 & 7 \\ - 1 & 4 & 2 \\ \hline 2 & 0 & 5 \end{array} \end{array}$$

$$\begin{array}{r} \text{b.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 6 & 3 & 9 \\ - 5 & 0 & 9 \\ \hline 1 & 3 & 0 \end{array} \end{array}$$

$$\begin{array}{r} \text{c.} \quad \begin{array}{c|c|c} \text{H} & \text{T} & \text{O} \\ \hline 4 & 2 & 5 \\ - 4 & 1 & 3 \\ \hline & 1 & 2 \end{array} \end{array}$$

6. a. $689 - 432 = 257$

H	T	O
6	8	9
- 4	3	2
2	5	7

b. $547 - 27 = 520$

H	T	O
5	4	7
-	2	7
5	2	0

c. $194 - 31 = 163$

H	T	O
1	9	4
-	3	1
1	6	3

d. $636 - 5 = 631$

H	T	O
6	3	6
-		5
6	3	1

7. a. $652 - 130 = 522$

652
- 130
522

b. $495 - 34 = 461$

495
- 34
461

c. $548 - 146 = 402$

548
- 146
402

d. $837 - 27 = 810$

837
- 27
810



e. $396 - 194 = \mathbf{202}$

$$\begin{array}{r} 396 \\ - 194 \\ \hline 202 \end{array}$$

f. $624 - 3 = \mathbf{621}$

$$\begin{array}{r} 624 \\ - 3 \\ \hline 621 \end{array}$$

8. Most students would use the pencil-and-paper method for solving this problem.

$$\begin{array}{r} 252 \\ - 150 \\ \hline 102 \end{array}$$

There are other strategies that would work, too. For example, you may have subtracted $52 - 50 = 2$ and $200 - 100 = 100$, so the answer is 102.

There are 102 hectares of crop left to harvest.

DAY 12: LESSON 1

1. There are not enough ones. You can't take 7 away from 3.

2. **5** tens and **13** ones = **63**



DAY 12: LESSON 1

3. a. **1** tens and **6** ones = **16**

$$\begin{array}{r} \text{b. } 63 \\ - 47 \\ \hline 16 \end{array}$$

4. There are not enough ones. You can't take 6 away from 2.

5. You can trade a ten for 10 ones. You can regroup.

6. a. **4** hundreds, **3** tens, and **6** ones = **436**

$$\begin{array}{r} \text{b. } 572 \\ - 136 \\ \hline 436 \end{array}$$

$$\begin{array}{r} \text{7. a. } 345 \\ - 227 \\ \hline 118 \end{array}$$

$$\begin{array}{r} \text{b. } 461 \\ - 334 \\ \hline 127 \end{array}$$

$$\begin{array}{r} \text{c. } 283 \\ - 179 \\ \hline 104 \end{array}$$

$$\begin{array}{r} \text{d. } 524 \\ - 205 \\ \hline 319 \end{array}$$



DAY 12: LESSON 2

1. a. There are not enough tens. You can't take 50 away from 20.

b. Now you have **2** hundreds, **12** tens, and **7** ones.

c. You have **1** hundreds, **7** tens, and **2** ones left.

$$\begin{array}{r} \text{d. } 327 \\ - 155 \\ \hline 172 \end{array}$$

2. a. Now you have **3** hundreds, **1** tens, and **11** ones.

b. Now you have **2** hundreds, **11** tens, and **11** ones.

$$\begin{array}{r} \text{c. } 321 \\ - 168 \\ \hline 153 \end{array}$$

3. a. There are not enough ones or tens to subtract 135.

b. Now you have **2** hundreds, **9** tens, and **10** ones.

c. Yes

$$\text{d. } 300 - 135 = 165$$

DAY 12: LESSON 2 AND DAY 13

4. a.
$$\begin{array}{r} 415 \\ - 284 \\ \hline 131 \end{array}$$

b.
$$\begin{array}{r} 262 \\ - 145 \\ \hline 117 \end{array}$$

c.
$$\begin{array}{r} 523 \\ - 377 \\ \hline 146 \end{array}$$

d.
$$\begin{array}{r} 600 \\ - 192 \\ \hline 408 \end{array}$$

DAY 13

1.
$$\begin{array}{r|l|l} H & T & O \\ \hline 4 & \cancel{5}^4 & \overset{1}{4} \\ -2 & 4 & 8 \\ \hline 2 & 0 & 6 \end{array}$$

2. a.
$$\begin{array}{r|l|l} H & T & O \\ \hline 3 & \cancel{7}^6 & \overset{1}{5} \\ -2 & 3 & 6 \\ \hline 1 & 3 & 9 \end{array}$$

b.
$$\begin{array}{r|l|l} H & T & O \\ \hline 5 & \cancel{6}^5 & \overset{1}{2} \\ -3 & 4 & 9 \\ \hline 2 & 1 & 3 \end{array}$$

c.
$$\begin{array}{r|l|l} H & T & O \\ \hline 8 & \cancel{6}^5 & \overset{1}{0} \\ -4 & 3 & 4 \\ \hline 4 & 2 & 6 \end{array}$$

3.
$$\begin{array}{r|l|l} H & T & O \\ \hline \cancel{4}^3 & \overset{1}{3} & 7 \\ -2 & 6 & 5 \\ \hline 1 & 7 & 2 \end{array}$$

4.
$$\begin{array}{r|l|l} H & T & O \\ \hline \cancel{7}^6 & \cancel{2}^1 & \overset{1}{3} \\ -2 & 4 & 9 \\ \hline 4 & 7 & 4 \end{array}$$

5.
$$\begin{array}{r|l|l} H & T & O \\ \hline \cancel{4}^3 & \cancel{9}^8 & \overset{1}{0} \\ -2 & 7 & 3 \\ \hline 1 & 2 & 7 \end{array}$$



6. a.

H	T	O
⁴ 5	¹ 8	3
- 2	9	1
2	9	2

b.

H	T	O
⁵ 6	¹ 1	5
- 1	5	0
4	6	5

c.

H	T	O
² 3	¹² 3	¹ 4
- 1	5	8
1	7	6

d.

H	T	O
³ 8	¹ 6	9
-	9	2
2	7	7

e.

H	T	O
⁸ 9	⁹ 0	¹ 0
- 6	8	5
2	1	5

7. a. $673 - 429 = 244$ b. $329 - 147 = 182$ c. $412 - 57 = 355$ d. $920 - 300 = 620$

DAY 14: LESSON 1

1. a.

321	round to	300
- 95	round to	100
<hr/>		

200 ← estimated difference

b.
$$\begin{array}{r} 634 \\ - 387 \\ \hline \end{array}$$
 $\xrightarrow{\text{round to}}$
$$\begin{array}{r} 600 \\ - 400 \\ \hline \end{array}$$

200 \leftarrow estimated difference

c.
$$\begin{array}{r} 692 \\ - 103 \\ \hline \end{array}$$
 $\xrightarrow{\text{round to}}$
$$\begin{array}{r} 700 \\ - 100 \\ \hline \end{array}$$

600 \leftarrow estimated difference

2. You may have shown the equation the other way.

a. $593 - 215 =$

- ☒ 400
☐ 300
☐ 200

b. $921 - 178 =$

- ☐ 400
☐ 600
☒ 700

c. $305 - 89 =$

- ☐ 100
☒ 200
☐ 300

d. $669 - 490 =$

- ☐ 400
☐ 300
☒ 200

$600 - 200 = 400$

$900 - 200 = 700$

$300 - 100 = 200$

$700 - 500 = 200$

3. You may have shown the equation the other way.

a. $581 - 54 =$

- ☐ 550
☐ 540
☒ 530

b. $676 - 327 =$

- ☐ 380
☒ 350
☐ 320

$580 - 50 = 530$

$680 - 330 = 350$



DAY 14: LESSON 2

$$\begin{array}{r} 1. \text{ a. } 573 \\ - 254 \\ \hline 321 \end{array}$$

$$\begin{array}{r} 254 \\ + 321 \\ \hline 575 \end{array}$$

The answer is **incorrect**.

$$\begin{array}{r} \text{c. } 161 - 37 = 124 \quad 37 \\ + 124 \\ \hline 161 \end{array}$$

The answer is **correct**.

$$\begin{array}{r} 2. \text{ a. } 344 \\ + 53 \\ \hline 397 \quad \checkmark \end{array}$$

$$\begin{array}{r} 397 \\ - 53 \\ \hline 344 \end{array}$$

$$\begin{array}{r} \text{c. } 93 \\ + 196 \\ \hline 289 \quad \checkmark \end{array}$$

$$\begin{array}{r} 289 \\ - 196 \\ \hline 93 \end{array}$$

$$\begin{array}{r} \text{b. } 920 \\ - 375 \\ \hline 545 \end{array}$$

$$\begin{array}{r} 375 \\ + 545 \\ \hline 920 \end{array}$$

The answer is **correct**.

$$\begin{array}{r} \text{d. } 704 - 295 = 509 \quad 295 \\ + 509 \\ \hline 804 \end{array}$$

The answer is **incorrect**.

$$\begin{array}{r} \text{b. } 629 \\ + 170 \\ \hline 889 \quad \times \end{array}$$

$$\begin{array}{r} 889 \\ - 170 \\ \hline 719 \end{array}$$

$$\begin{array}{r} \text{d. } 508 \\ + 275 \\ \hline 773 \quad \times \end{array}$$

$$\begin{array}{r} 773 \\ - 275 \\ \hline 498 \end{array}$$



DAY 14: LESSON 2

Timed Exercise Answers

$14 - 5 = 9$

$16 - 8 = 8$

$12 - 5 = 7$

$13 - 4 = 9$

$15 - 8 = 7$

$11 - 9 = 2$

$17 - 9 = 8$

$13 - 8 = 5$

$14 - 6 = 8$

$10 - 4 = 6$

$11 - 8 = 3$

$12 - 6 = 6$

$16 - 10 = 6$

$10 - 5 = 5$

$11 - 2 = 9$

$12 - 3 = 9$

$13 - 5 = 8$

$14 - 7 = 7$

9

13

15

11

17

10

-4

-6

-6

-3

-8

-8

5

7

9

8

9

2

18

16

14

10

11

12

-9

-7

-9

-2

-4

-9

9

9

5

8

7

3



DAY 15

The answers to the problems show one strategy that you may have used. It is okay to solve the problem a different way.

$$\begin{array}{r} \text{1. a.} \quad \begin{array}{r} \overset{1}{1} 85 \\ + 148 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 233 \end{array}$$

It is 233 kilometres from Westlock to Red Deer.

$$\begin{array}{r} \text{b.} \quad \begin{array}{r} 233 \\ + 145 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 378 \end{array}$$

They travelled 378 kilometres from Westlock to Calgary.

$$\begin{array}{r} \text{c.} \quad \begin{array}{r} \overset{8}{8} 1 \\ 594 \\ - 378 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 216 \end{array}$$

It is 216 kilometres from Calgary to Lethbridge.



DAY 15 AND DAY 16: LESSON 1

2. a. $\$12 + \$12 = \$24$ $\$8 + \$8 = \$16$

$$\begin{array}{r} \$24 \\ + \$16 \\ \hline \$40 \end{array}$$

It cost the family 40 dollars to go to the zoo.

b. There are 60 minutes in one hour.

$$\begin{array}{r} 60 \\ 60 \\ + 60 \\ \hline 180 \end{array}$$

They spent 180 minutes at the zoo.

3. Your problem will be different than the one here. This is an example. Did you include all the necessary information in your problem?

Dad bought a T-shirt for each person. The adult T-shirts were 15 dollars each. The children's T-shirts were 11 dollars each. How much money did Dad spend?

DAY 16: LESSON 1

1. \$5.65 five dollars and sixty-five cents
2. \$8.90 eight dollars and ninety cents
3. \$0.52 fifty-two cents
4. \$8.00 eight dollars
5. \$1.83 one dollar and eighty-three cents



DAY 16: LESSON 2

$$\begin{array}{r} 1. \quad \$3.49 \\ + \$1.05 \\ \hline \end{array}$$

$$\$4.54$$

You would pay \$4.54 for macaroni and cheese and a glass of milk.

$$\begin{array}{r} 2. \quad \$1.50 \\ + \$1.05 \\ \hline \end{array}$$

$$\$2.55$$

A hot dog and milk would cost \$2.55.

$$\begin{array}{r} 3. \quad \begin{array}{r} 4 \\ \$3.00 \\ + \$0.99 \\ \hline \end{array} \end{array}$$

$$\$4.01$$

You would get back \$4.01.

Timed Exercise Answers

$$11 - 5 = 6 \quad 17 - 7 = 10 \quad 16 - 8 = 8 \quad 11 - 4 = 7 \quad 15 - 6 = 9 \quad 17 - 9 = 8$$

$$18 - 9 = 9 \quad 14 - 8 = 6 \quad 13 - 6 = 7 \quad 10 - 6 = 4 \quad 9 - 8 = 1 \quad 14 - 5 = 9$$

$$16 - 7 = 9 \quad 10 - 4 = 6 \quad 9 - 2 = 7 \quad 11 - 3 = 8 \quad 6 - 5 = 1 \quad 13 - 7 = 6$$



DAY 17: LESSON 1 AND DAY 17: LESSON 2

$$\begin{array}{r} 10 \\ - 5 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 11 \\ - 7 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 13 \\ - 8 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 12 \\ - 4 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 14 \\ - 7 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 15 \\ - 8 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 9 \\ - 6 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 17 \\ - 8 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 16 \\ - 9 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 11 \\ - 2 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 10 \\ - 3 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 13 \\ - 9 \\ \hline 4 \end{array}$$

DAY 17: LESSON 1

1. $7 + 8 = 15$

2. a. $5 + 8 = 13$

b. $9 + 7 = 16$

c. $3 + 7 = 10$

d. $9 + 8 = 17$

3. $15 - 6 = 9$

4. a. $16 - 8 = 8$

b. $9 - 3 = 6$

c. $12 - 5 = 7$

d. $10 - 8 = 2$

e. $11 - 5 = 6$

DAY 17: LESSON 2

1. $\begin{array}{r} 85 \\ - 43 \\ \hline 42 \end{array}$ so

$$\begin{array}{r} 43 \\ + 42 \\ \hline 85 \end{array}$$



$$\begin{array}{r} 2. \text{ a. } 71 + 52 = 123 \\ 123 \\ - 71 \\ \hline 52 \end{array}$$

$$\text{b. } 24 + 55 = 79$$

$$\begin{array}{r} 79 \\ - 55 \\ \hline 24 \end{array}$$

$$\begin{array}{r} \text{c. } 103 + 112 = 215 \\ 215 \\ - 103 \\ \hline 112 \end{array}$$

$$\text{d. } 342 + 136 = 478$$

$$\begin{array}{r} 478 \\ - 342 \\ \hline 136 \end{array}$$

$$\begin{array}{r} 3. \quad 738 \\ - 637 \\ \hline 101 \end{array}$$

$$4. \quad 95 - 45 = 50$$

$$\begin{array}{r} 5 \text{ a. } 267 - 126 = 141 \\ 126 \\ + 141 \\ \hline 267 \end{array}$$

$$\text{b. } 735 - 520 = 215$$

$$\begin{array}{r} 735 \\ - 215 \\ \hline 520 \end{array}$$

$$\begin{array}{r} \text{c. } 117 - 84 = 33 \\ 84 \\ + 33 \\ \hline 117 \end{array}$$

$$\text{d. } 157 - 115 = 42$$

$$\begin{array}{r} 157 \\ - 42 \\ \hline 115 \end{array}$$

DAY 17: LESSON 3 AND DAY 18

DAY 17: LESSON 3

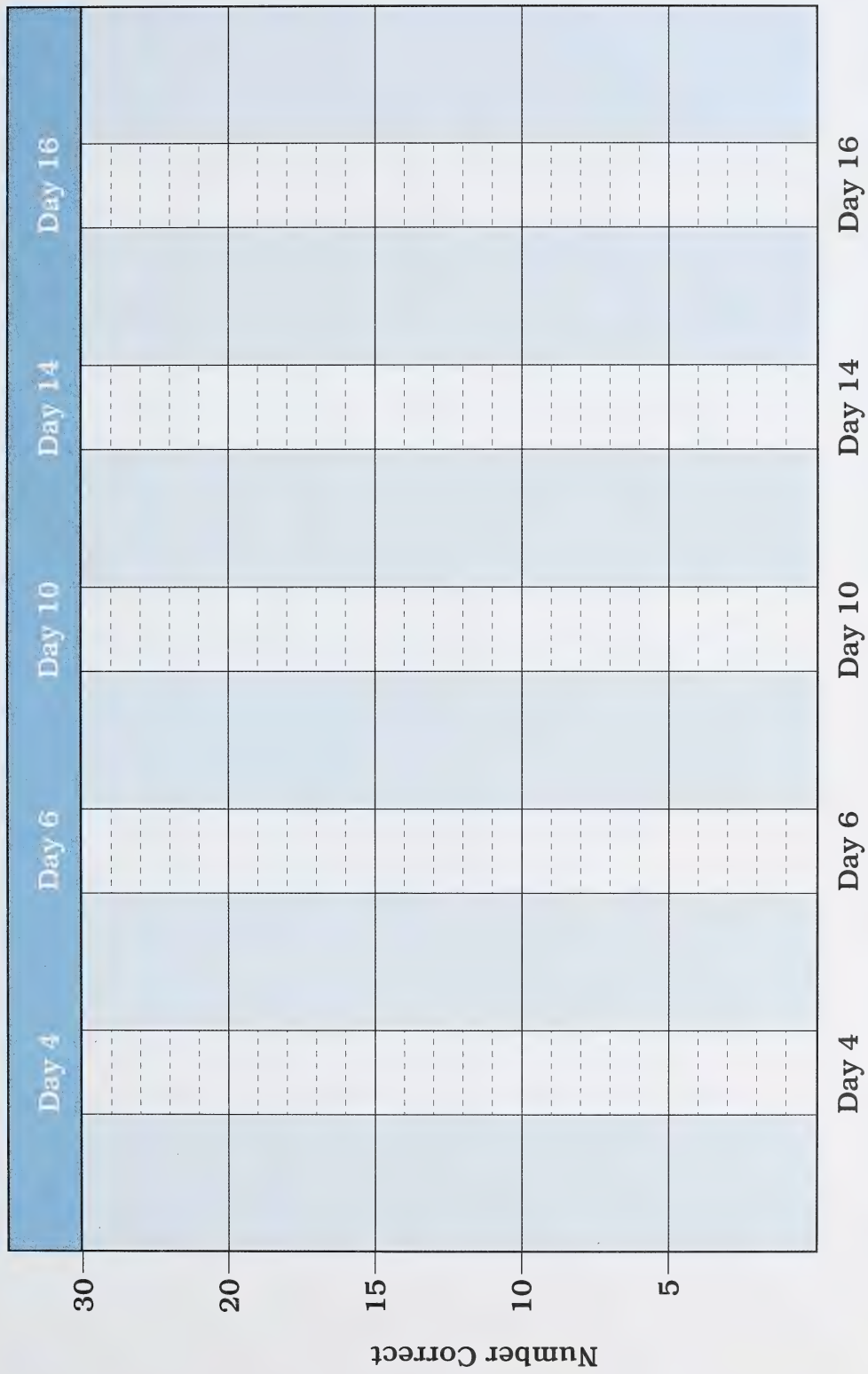
1. You can find the missing number by **adding \$43 and \$7**.
2. $\$50 - \$43 = \$7$
3. Sarah had **50** dollars at the beginning of the trip.

DAY 18

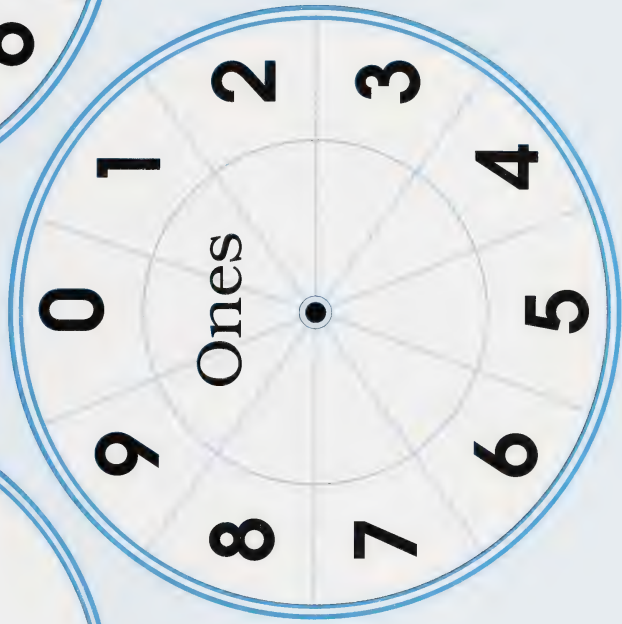
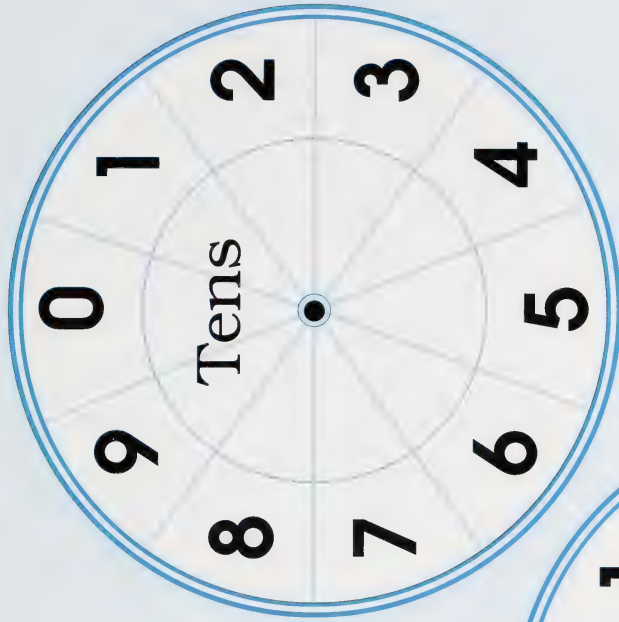
There are no self-marking activities for Day 18.



MATH FACTS GRAPH



SUM-FUN SPINNERS



SUM-FUN RECORDING SHEET

"HIT THE TARGET" NUMBER CARDS

1	2	3	1	2	3
4	5	6	4	5	6
7	8	9	7	8	9

"HIT THE TARGET" NUMBER CARDS

1	2	3	4	5	6
7	8	9	1	2	3
4	5	6	7	8	9

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